The Journal of the
American Medical Association

VOL. XXXI. CHICAGO, ILLINOIS, SEPTEMBER 3, 1898. No. 10.

ADDRESSES.

THE INFLUENCE OF AGE, SEX AND RACE IN SURGICAL AFFECTIONS.

Address of the Chairman of the Section on Surgery and Anatomy, at the Forty-ninth Annual Meeting of the American Medical Association, held at Denver, Colo., June 7–10, 1898.

BY WM. L. RODMAN, M.D.
LOUISVILLE, KY.

Gentlemen of the Section:—Allow me first to express my grateful appreciation for the honor conferred upon me at the Semi-Centennial Meeting. To be chosen as Chairman of this, the largest Section of the ASSOCIATION, is indeed an honor any one should esteem highly.

I have endeavored, with the aid of the distinguished Secretary, Dr. Parkhill, to present to you as attractive a program as has ever been offered to this or any other Section in former years. Indeed, too much credit cannot be given our Secretary for his indefatigable labors and their fruitful results. We regret that his obligations to our country, now resounding from end to end with stern alarums, deprive us of his companionship and help on this occasion, to which he has looked forward with such keen pleasure, and for the success of which he is so largely responsible. I am sure that I voice the sentiments of every member of the Section, when I thank him for his work in our behalf, and bespeak for him a safe return to Denver, where his professional worth and surgical skill have long been recognized as second to none. Our loss is the country's gain, and we might well wish that all of our countrymen needing surgical attention in the pending war with Spain, may fall into hands as competent and deft as the Surgeon of Colorado's Volunteer Corps.

We also wish to express our gratitude to Dr. Powers, the Acting Secretary, who on short notice assumed the work and gave to it most intelligent and conscientious attention.

In offering for your consideration the customary Chairman's Address, I have chosen for my subject "The Influence of Age, Sex and Race in Surgical Affections." Time limits will prevent consideration of all diseases having a bearing upon the subject, and your attention will, therefore, be asked to some affections seeming to have a pointed claim to our notice. The treatment of racial differences has been almost necessarily limited to the white and black races of North America, as but few of the many army and navy surgeons to whom I have written for data gathered by them in their various assignments, have been able to reply at satisfactory length on account of the exacting demands of the past three months.

The diseases of the negro possess an abiding interest to those of us living in the South, called upon as we are daily to give him professional succor in private, hospital and dispensary practice. Although much that is of value has been written of his immunities and susceptibilities to disease, it has occurred to me that the last word has not been spoken, due more to the changes in the negro himself than to inaccurate observations on the part of medical writers of the past and present.

To the careful student who reviews the literature of the subject, there is no escape from the conclusion that the negro as we now find him, with changed environments, habits and associations, is a different being from what he was in antebellum days. He came to America three hundred years ago with certain immunities and susceptibilities to disease, which were so conspicuous as to be noted by all trustworthy observers. A few of the immunities he hitherto enjoyed have been maintained, more have been lost in part, others wholly exhausted, and to some few diseases he shows not only the same liability as the Caucasian, but even exceeds him in vulnerability, to-wit: local tuberculosis of glands, skin and bones. The original susceptibilities of the negro seem to have abided with him, and to have undergone less change, he still being as obnoxious to fibroid and other benign neoplasms as he has ever been, as well as to keloid, elephantiasis and tetanus. Not only is the race manifesting an increasing tendency to disease of all kinds, but statistics of every Southern hospital will prove them to be less resistant and to show a larger mortality, both in medical and surgical affections (operative and non-operative cases), than the Caucasian. The full-blood is less resistant to begin with, and the mulatto inherits the weaknesses of both races, the strength of neither, and begins life with the heaviest of handicaps. Therefore, it is not surprising to the observant to occasionally hear such authorities as Hunter McGuire, D. W. Yandell, and other thoughtful practitioners of large and long experience with this race, say that the African will in time become as extinct in this country as the bisons and the North American Indian. It is clearly foreshadowed, that he can not maintain the struggle for life with a race his superior in every respect, in a climate to which he is ill-suited at best.

MALIGNANT DISEASE.

All early writers testified to the immunity of the African, in both his native and adopted country, to malignant disease. It can not be doubted, I think, that as a race, cancer was most rare with them up to fifty years ago. These early writings have too much influenced practitioners of this generation, however, and many reason that cancer is still rare with negroes, because such was undoubtedly the case a few generations ago.

Malignant disease (both sarcoma and carcinoma) is certainly increasing in frequency in the black with even greater ratio than in the white race. From a condition of practical immunity they have become nearly as liable to malignant disease of some organs

as the white, quite as much so to that of the mammary gland and the seemingly more obnoxious cancer of the uterus. The records of the City Hospital and Health Department of Louisville for the past thirty years are in line with the statements and statistical data of Billings and Matas, and emphasize especially the frequency of cancer of the uterus in negroes. It would be interesting to know what per cent. of the cases were in full-bloods; but it is impossible to ascertain this, as no distinction is made in our reports between full-bloods and mulattoes. Nor is it possible to determine with reasonable accuracy the relative number of cases of sarcoma and carcinoma, and therefore, no attempt is made to do so.

It is safe to say, however, that the negro is relatively somewhat more prone to sarcoma than cancer. As has been stated, the mammary gland suffers as often in the black as in the Caucasian, the uterus more so. Now it would appear *à priori*, that the negro, almost universally affected as he is with phimosis, should show a special susceptibility to cancer of the penis; yet I have never seen such a case, nor do the records of our city hospital indicate that one has been treated there in thirty years. Of 207 deaths from cancer in negroes reported to the Louisville Health Department in thirty years, none have been entered as cancer of the penis.

According to the eleventh census (just issued), malignant disease occurs in every 100,000 living inhabitants:

Whites	53.93
Negroes	36.65
North American Indians	5.31

Chinese a little less liable than Indians.

To every 1000 deaths from known causes in the United States in persons over forty-five years of age, there were due to cancer and tumor:

Whites	62.86
Negroes	29.81
North American Indians	14.49
Chinese	12.99

In this country, as in England, cancer is alarmingly on the increase. Both races show a marked increment of gain, and so far as cancers in general are concerned, the increase has been about the same in the two races, as will be shown by the table giving every death from cancer in Louisville for thirty years. These records have been gone over by my assistant, and are, I am sure, reliable, as he has devoted weeks to the work. It will be seen that the number of cases has doubled each decennium.

CANCER OF ALL PARTS.

1868 to 1878—total number deaths 244; white 205; colored 39.
1878 to 1888—total number deaths 484; while 411; colored 73.
1888 to 1898—total number deaths 892; white 797; colored 95.
Total number deaths for thirty years 1620: white 1413; colored 207.

There have been 161 cancerous patients in the Louisville City Hospital during the past twenty years (1878 to 1898). The records of the decennium from 1868 to 1878 are incomplete and are therefore excluded. Of cases admitted there were 118 white and 43 colored.

1878 to 1888—total number cases admitted 63; white 47; colored 16.
1888 to 1898—total number cases admitted 98; white 71; colored 27.
1878 to 1898—total number cases admitted 161; white 118; colored 43.

These statistics agree fully with those of Matas, drawn from the service of the Charity Hospital in New Orleans, and show that malignant disease, instead of being uncommon in the negro, is as often encountered in him in Southern hospitals as it is in the whites.

Of 1620 deaths from malignant disease reported to the Louisville health office, 1413 were whites a 207 colored, or about one-eighth of the total numb the normal proportion of colored population to wh in Louisville is one to four, which indicates the m tality in the colored population to be 50 per cent what it is in the white for cancers in all situatio This I believe to be nearer the truth than the smal hospital series indicates, as it deals with the ent population of the city, and is moreover nearly accord with Billings' eleventh census statistics (dea rate 53.93 to 100,000 living white inhabitants a 36.65 colored). Further, these represent deaths, a are not open to the objections clinical diagnoses m be.

The discrepancy between the statistics of the ho pital and health office are apparent and not real, f while the hospital shows the colored race to suffer often as the white, it should be remembered that t improvidence and indigence of this race force the into the city hospital twice as frequently as the m favored whites. The normal hospital proportion colored to white is just double that shown by the ci at large; hence the two reports are in perfect harmo and show the negro to suffer one-half as often fr cancers in general as the whites.

Mammary gland.—Far from being uncommon, many practitioners believe, malignant disease of t mammary gland is as frequent in the black as th white. Personally, I have seen five cases, and kn from a colleague that two others were recently in M city hospital. The first case of cancer of the bre I ever saw was in a negress about forty years of ag as black as a crow's wing. She died from recurren after operation, at the usual time and in the usu way, confirming the clinical diagnosis. In all th others the clinical diagnosis was confirmed by th microscope and by the death of each from recurren

There were 889 cases of cancer of the bre reported in the eleventh census; 811 females, 7 males. One occurred under 15 years of age; 1 between 15 and 45; 670 at and over 45. Rate death to 100,000 inhabitants: females, 8.23; mal 0.29; age 45 to 65, 30.08; 65 and over, 50. Dea rate practically same in white (4.27) and colored (4.1

The records of the Louisville city hospital for th past twenty years show that three-fifths of the ca were whites and two-fifths colored, though the lat represent but one-third of the hospital populati Our health office shows that there were fifty-eig deaths from mammary cancer in the past thirty yea Of this number fifty were white and eight colored.

1868 to 1878—total number cases mammary cancer 14; white 14; colored
1878 to 1888—total number cases mammary cancer 17; white 15; colored
1888 to 1898—total number cases mammary cancer 27; white 21; colored

1868 to 1898 . . . . . 58; white 50; colored

Undoubtedly there have been a larger number deaths from cancer of the breast, but many ha doubtless been entered as "cancer" without givi situation. Small as this series is, it emphasizes th increase of cancer in the negro, especially, and sho that as a race they suffered more frequently than th white during the past ten years.

Cancer of uterus.—The eleventh census sho cancer of the uterus to be far more common in th colored race. There were 1472 cases reported a the death rate was 24.94 in the negro and 14.41, but little more than half the number in white wome Table shows death rate per 100,000 during cens period at all ages:

	All ages.	15 to 45 years.	45 to 65 years.	65 years and over.
Total	14.93	9.32	54.01	45.91
White	14.41	8.79	52.29	44.36
Native born	10.98	7.51	51.71	43.71
Foreign born	22.92	11.98	50.79	41.77
Colored	24.94	18.82	94.59	88.36

The death rate is very much higher in the colored race for all ages.

Both the Louisville city hospital and health office statistics show cancer of the uterus to be more common in the black race. From 1878 to 1898 there were 31 cases of cancer of the uterus in the city hospital; of these 23 were white and 8 colored (normal proportion of colored to white in hospital 1 to 3), showing relatively a greater number of cases in the black race:

1878 to 1888—total cases 13; white 12; colored 1.
1888 to 1898—total cases 18; white 11; colored 7.
1878 to 1898—total cases 31; white 23; colored 8.

From 1868 to 1898 there were 272 deaths from cancer of the uterus reported to the health office of Louisville; of this number 216 were white and 56 colored. It shows a per cent. against the negro—our normal population being 1 to 4. Total number deaths from carcinoma uteri in Louisville from:

1868 to 1898—272; white 216, colored 56.
1868 to 1878— 39; white 29, colored 10.
1878 to 1888—190; white 74, colored 27.
1888 to 1898—133; white 113, colored 20.

I would be glad to pursue the subject of regional liability in the two races further, but it is impossible at this time; suffice it to say that liable as the mammary gland and uterus of the negro are to malignant disease, certain other regions which one would expect to suffer often do so infrequently. I have never seen cancer of the penis, larynx or tongue in a negro, while rectal cancers are common.

Cancer is rare in Indians, and when it does occur, I am informed, attacks the breast and uterus. Great smokers as they are, their immunity to cancer of the lips has been remarked upon by a number of my surgeons who have written me. Cancer is rare in all savage races, and is pre-eminently an affection which increases in frequency with a higher state of civilization. Dark-skinned races suffer less than the fair.

Age and sex.—Women are twice as liable to malignant tumors on account of their proneness to disease of the uterus and mammary gland, which embrace one-half of the cases in the female sex. Snow's statistics, gathered from the Cancer Hospital in London, and those of W. Roger Williams recently published, clearly attest woman's double liability. The sexes are upon a parity up to the fifth quinquinnium, when the difference between them becomes striking. From 25 to 55 the female is nearly three times as liable to malignant disease, and from 55 to 90 is almost twice as obnoxious. Gusserow, who analyzed 35 cases of uterine cancer, found only two to have occurred prior to 20; while of Gross' series of 1622 mammary cancers the youngest was 21, a ready explanation of the heavy tribute woman pays to malignant disease during the activity and devolution of her sexual organs.

Age.—Infancy and childhood are practically exempt from epithelial malignant neoplasms (cancer), the youngest case on record being one of cylindroma of the rectum in a girl aged 11 (Stern). Cancer being rare prior to 30, then gets to be more common, ever thereafter more liable to occur with each succeeding year, and has been reported by Sutton at 102. Practically all tumors of infancy and early childhood are sarcomata, they being nearly as exempt from benign neoplasms as they are to true cancers. Sarcomas of the eye, kidney, testis and prostate are common in infancy, and may be in many instances congenital.

Duzan analyzed 182 cases of sarcoma in infancy, and found 70 of the eye, 45 of the kidney, 11 of the testicle, 8 of the prostate; while the bones, tongue, abdomen and brain were affected 5 times each; lung and dura mater 4 times; pancreas 3; liver, tonsil and rectum 2 each and stomach 1.

During the second decennnium the long bones and maxillæ are the usual sites of sarcoma. The long bones still suffer in the third, and in the fourth decennium some of the long bones, as the humerus, and the mammary gland and testicle exhibit their greatest tendency to sarcomatous change. After forty, sarcoma is rather uncommon until sixty, when it again becomes frequent. Like cancer, it is common as a senescent change, but unlike it, shows its greatest destructiveness in infancy and early childhood.

The following tables are by W. Roger Williams, on "The Malignant Tumors of Infancy, Childhood and Youth," the *Lancet*, London, May 1, 1898:

TABLE 1. Showing the deaths due to malignant disease at different age periods:

Sex.	All ages.	Under 1 year.	1–2.	2–3.	3–4.	4–5.	Total under 5 years.
Males	57,454	8	6	6	6	5	31
Females	10,489	7	6	6	6	6	31

	5–10	10–15	15–20	20–25	25–35	35–45	45–55	55–65	65–75	75–85
Males	18	18	33	50	145	426	1095	1727	1555	591
Females	15	18	25	41	321	1313	2464	2922	2330	910

Over 85, males, 65, females, 101. Total both sexes, 16,243.

TABLE 2. Showing the number of deaths from malignant disease in early life per million persons living at each age period:

Age periods.	Under 5.	5–10.	10–15.	15–20.	20–25.	All ages.
1861–70	13	7	7	7	17	384
1871–80	12	7	7	15	27	464
1881–90	20	10	11	20	35	539

BENIGN NEOPLASMS.

As a class the mesoblastic benign neoplasms are more common with the negro, he being exceptionally obnoxious to fibroma, lipoma and keloid. Molluscum fibrosum, which I am not disposed to question is more frequent in the negro, is, I am sure, a more common affection in the whites of this and even more Northern latitudes than authorities admit. Many speak of it as an affection almost peculiar to the black races of the tropics, yet I have in my own practice seen three most beautiful instances of this disease in white males, all past forty, within the last four months. I have seen the disease more often in the white than the black. Keloid is also, I take it, more common in the white race than many believe, though it is certainly many times less frequent than in the negro. I have seen a number of typical keloids supervening upon vaccination scars, on the lobule of the ear after the piercing, and upon cicatrices variously situated, in the white race. I agree perfectly with Tiffany that operation does no good in young subjects, and that there is in elderly persons afflicted with keloid a spontaneous tendency to undergo resolution. There is no disproportion between the sexes in their liability to benign tumors.

Age: As has been intimated, the very young are practically exempt from benign neoplasms. The first decennium suffers rarely, and then usually from congenital angeiomata and lymphangeiomata.

TUBERCULOSIS OF BONES, JOINTS, SEROUS MEMBRANES AND GLANDS.

Pulmonary consumption, which was practically

unknown to the Africans and Indians of North America, several generations ago, has become their deadliest foe, and is fast decimating their ranks. It is more than twice as common in the African as the white, and still more prevalent with the Indian, the latter race suffering directly in proportion as they give up their tepee life and live in poorly ventilated buildings. Therefore, it is not surprising that local tuberculosis of bones, joints, lymphatic glands and serous membranes should show the same proportion of cases in the three races.

I am informed by reliable observers in the Medical Corps of the Army and Indian Departments, that an enormous per cent. of Indian boys and girls develop one or more varieties of surgical tuberculosis when they give up their outdoor life for the schoolroom. Tuberculosis in all of its manifestations has increased with the Mexicans in the same ratio as with the Indians.

Age has a distinct influence, and a majority of such cases occur in the first decennium, about one-fourth in the second, and the remainder after 20. The two sexes are equally obnoxious.

VARICOCELE.

This disease is closely associated with the evolution of sexual apparatus, and is, therefore, largely encountered in adolescence. In my own series of 215 operative cases, and many others not treated, I have never found it to begin before puberty, and rarely after 30. The immense preponderance of cases will be met with in the decennium from 15 to 25. Occurring, as it generally does, in youths who have not begun a sexual life, it is, as a rule, cured by marriage, unless of long standing and accompanied with atrophy of the testicle. While relatively rare in married men, I have operated within the last year upon four such cases in men aged 24, 30, 35 and 57 years respectively, the last being older than any other case in my series; in fact, his was the only instance of the disease I have seen past 40. He was a frail man, doing heavy lifting in his occupation as ship carpenter. The pampiniform plexus was greatly enlarged in this case, and the pain in the cord and back, and the dyspeptic symptoms were so pronounced that he was sent to me from Indiana for operation. He was promptly cured, and I have never seen a quicker and more decided improvement in one's general health, follow any surgical procedure. Negroes are practically immune to varicocele. It has been frequently observed that this race enjoys a relative immunity to varices in general. Varicose veins of the legs and hemorrhoids are noticeably less common in the negro, still a number of such cases have come under my observation. I have for fifteen years been looking for a varicocele in the negro, and my chief of clinic has been instructed to examine all males coming to our clinic, and has done so with negative result. In an analysis of more than 600 cases treated and operated upon by Louisville surgeons, not a single case has been seen in the negro, and only one encountered in a mulatto. I have taken great pains to see each of the clinical teachers and their assistants, and the records of the four large dispensary services of Louisville do not furnish a single case of varicocele, notwithstanding the fact that nine-tenths of our patients are negroes. Correspondence with surgeons and clinical teachers of other cities has almost invariably been followed by the statement, "Have not seen varicocele in negroes."

Prof. J. William White of Philadelphia, recen told me that in several hundred operations he h done for varicocele, none were negroes. Horwitz Philadelphia, in 278 cases, has seen but a single stance, and that in a mulatto. Kirby of Philadelp has not seen it in the negro. Tiffany of Baltimo has had but one case and that in a bright mula Prof. John P. Bryson of St. Louis writes me as f lows: "We have failed to elicit, either from priv practice or from clinics of the St. Louis Medi College or the St. Louis Hospital, a single case prostatic hypertrophy or of varicocele occurring the full-blooded negro. While, as you say, the ne population of St. Louis is not large, it seems likely that these conditions should exist to any the rarest degree without some of them appearing one or other of the two above named clinics. I ha had abundant evidence of the prevalence of tub cular affections of both prostate and testis in the f black, but of hypertrophy of the former or of va cocele, I have no record or memory. The questi is an interesting one, and may shed, on investigati some light upon the obscure subject of the etiolog

Professor Hunter McGuire of Richmond, Virgini writes me as follows: "I have never seen a c of varicocele in the full-blooded negro. I do n remember to have seen one in a mulatto."

Dr. F. C. Leber of Louisville writes: "Varicoce is rare in the negro. I can speak decidedly in reg to this, since in the four years during which I w President of the United States Board of Examine of Pensioners in this city, I can not recall a sing instance of this disease, while the cases in whi pensions were granted to white veterans for this affe tion were quite numerous, as the records show."

Captain and Assistant Surgeon William L. Kneed ler, United States Army, writes: "I have never see a well-marked case in the negro. I served three yea with colored regiments and examined many negr recruits."

Lydston of Chicago has seen "one case of mo erate varicocele in a mulatto."

Bull, Wyeth and Coley of New York tell me th they have never seen varicocele in the negro.

Therefore, I take it, I am justified in assumi that the full-blooded negro is practically immun and that mulattoes have varicocele most rarely. N one, so far as I know, has investigated this subje before, but it does seem to me that the evidence he presented is weighty. There are, I think, good re sons anatomically and physiologically for this marke immunity. Anatomically the testicles do not han so low as in the white; are not so large, though th penis is larger, and the scrotum is close fitting an less lax than in the white man. In the negro th condition is much like the scrotum of the dog. Phys iologically the negro begins his sexual life at puberty and does not know what it is to be continent an time thereafter. Dissections which I have made an caused to be done have failed to show any differenc in the veins of the negro from the white.

The usual causes of varicocele given in text-book and other literature fail to explain this striking im munity of the negro. I am satisfied that the bette mechanical support given his veins, together with hi lascivious life, furnish the best explanation. I also be lieve that the reason for this disease always affectin the left pampiniform plexus of veins is mostly du to the fact that the left testicle is larger, heavier an

more dependent than the right. This in conjunction with the fact that the spermatic veins empty at a right angle into the left renal instead of at an acute angle into the vena cava as upon the right side, and the absence of a valve upon the left side, which was shown by Brinton to exist upon the right, offer a perfectly satisfactory reason as to the leftsidedness of this disease, entailing as it must a sluggishness of the venous circulation upon this side. I do not believe that it ever occurs upon the right side unless preceded by a larger varicosity upon the left. In my 15 operations for varicocele I have encountered it as a bilateral condition in two cases, and in each the trouble was primary and much greater upon the left side. In only one of these cases did I operate upon both sides. In the second case the varix upon the right side promptly subsided after operating upon the left.

Several army surgeons to whom I have written making inquiry if varicocele was common among the North American Indians, have replied always in the negative. It must be, from the information I have at hand, at least rare, if it occurs at all, with the Crow, Arapahoe, Cheyenne, Sioux, Apache and Comanche Indians.

ENLARGED PROSTATE.

My own experience leads me to believe that enlargement of the prostate as a senescent change is common enough in the white after 50, but rarely seen in the negro. Every surgeon to whom I have written expresses the same opinion, many stating that they have never seen it in the full black. Prof. Hunter McGuire writes me as follows: "As much as I have had to do with this subject and as much as I have written about it, I never saw a case of chronic hypertrophy of the prostate gland in a pure negro; I see it very often in the mulatto and mixed breeds." Dr. F. C. Leber, who was president of the Louisville Board of Examiners of Pensioners, says that in his four years' service no case of enlarged prostate presented for examination in the negro. He has not seen it in private or hospital practice in thirty-seven years' experience. Prof. John P. Bryson of St. Louis writes that while he often sees tuberculosis of the prostate and testicle in the negro, he has never seen a single case of prostatic hypertrophy, nor do the records of the college and hospitals of St. Louis with which he is connected show a single instance of this affection. Profs. F. W. Samuel and H. H. Grant of Louisville, both surgical teachers and busy men, have never seen enlarged prostate in the negro, notwithstanding the fact that our negro population is one to four and our clinics are made up almost entirely from the negro population. Other Louisville surgeons, as Bloom, Roberts, Vance, Cartledge, Orendorf and Kline, have all expressed the opinion to me and have written that enlarged prostate in the negro is very rarely encountered. I have seen one case in a negro at 80 in twenty years' experience. My distinguished friend, Prof. P. S. Conner of Cincinnati, writes me that "enlarged prostate is infrequently found in blacks."

The records of the Louisville City Hospital for the last ten years have been most carefully examined, and there has not been a single case in the negro. I therefore agree with Matas that chronic enlargement of the prostate gland is a rare disease in hospital practice in Louisville, as it is in New Orleans, but can not agree with him that it is relatively nearly twice as common in the black race. Age has a most important bearing upon enlarged prostate, and it is practically never seen before middle life. It is said by most authors that about one-third of all males past middle life are subject to some enlargement of the prostate; in only about one-tenth of these, however, is the enlargement of such a nature as to be of pathologic import. I am sure that I have never seen enlarged prostate, not clearly due to malignant disease, prior to 50, and few cases under 60. White and Martin state that prostatic enlargement occurs as a rule in men who have passed the age of 55, and that "on the basis of extensive tabulations it is, however, apparent that enlargement of the prostate begins only exceptionally under the age of 50, or after that of 70."

Since writing the above a letter has been received from Prof. H. H. Mudd saying that his case of supposed hypertrophy of the prostate in a negro aged 27, proved to be malignant. This case has been often quoted, and I am glad to have an authentic statement from Dr. Mudd. In his letter he says: "I have never seen a pure case of hypertrophy of the prostate in the negro. I reported two cases at one time; one a pure case of hypertrophy in a white child, aged 13 months, and another, a full-blooded negro with very large prostate which proved to be malignant. The prostate of this case was a hard, firm, malignant growth of the size of the two fists. I will look up my reports and see if I can give you a description of the pathologic conditions found by examination under the microscope."

A letter of more recent date says that the enlargement of prostate filled the pelvis and was found to be alveolar sarcoma. This disposes of a hitherto puzzling and much quoted case.

GALL-STONES.

That gall-stones practically never occur during the first decade of life, and but rarely in the second, I am now assured after an extensive search of the literature of the subject and personal correspondence with a great many surgeons who have been kind enough to give me reports of the ages of all cases operated upon. It may be said that they are infrequently seen under 30. After 30 cholelithiasis becomes progressively more common with advancing years. In more than 9,000 autopsies gall-stones were found in one case in every thirty by Naunyn; in persons past 60, one out of every six is affected. The disease is unmistakably more common in women than in men, the proportion being usually given as five to two. In my opinion the disproportion is even greater than this, as is shown by a careful analysis of more than 100 cases operated upon by Louisville surgeons. Of 102 cases where sex was stated 18 only were males. The wearing of corsets, etc., has been held to explain the greater prevalence in females, but it would seem to me that a better explanation is given by their sedentary habits and greater tendency to stomach, liver and bowel troubles.

That the colored race is far less frequently affected than the white seems certain. Prof. Tiffany writes me that while he has done many operations for gallstones in the white, he has never seen a case in the negro. Prof. Hunter McGuire writes me that he has never seen a case in the negro. Dr. W. E. B. Davis of Birmingham has met with a case in a mulatto, but has seen none in the full-blood. In 106 cases oper-

ated upon by Louisville surgeons but one was in the negro. I have at great pains seen every surgeon in this city and gone over their series carefully with them, and am sure that these statistics are absolutely trustworthy. I have done more, and have gone to Dr. Soloman, Curator of the City Hospital, who has kept a record of every postmortem examination he has made since he has been curator (two years) and in not a single instance have stones been found in the gall-bladder of a negro. It, of course, was examined in every postmortem. He found them frequently in whites.

That the negro should suffer less frequently is, I think, explained by their more active life, better teeth and stronger digestion, coupled with the fact that they do not indulge in the highly seasoned and bilious-making food of the whites; they are also less liable to malaria and other conditions dependent upon, or associated with, a torpid liver.

ANEURYSM.

According to the Eleventh Census Report aneurysm is far more common (3 to 1) in the colored than in the white race. The records of the health office in Louisville agree fully with Billings' statistics, showing that in a population of one to four there were nearly as many deaths in negroes as in whites (14 colored and 18 whites) in the last decennial period.

Of patients treated at the Louisville City Hospital for ten years past, there were slightly more than three times as many negroes as whites, although the proportion of white to colored patients in this institution has been nearly three to one. Sex also has a most marked influence in the etiology of aneurysm. Crisp, in an analysis of 551 cases, found it to be seven times more common in men. Souchon's series of 98 cases shows 76 males and 22 females. An analysis of the cases at the Louisville City Hospital, and those reported to the health office for the past ten years, shows more than three times as many cases in men. The disproportion in the two sexes is, I think, readily explained by the greater tendency of the male sex to arterial degenerations on the one hand, and their occupation and habits on the other. Age has a most direct bearing, as aneurysm rarely occurs before 30. In the series analyzed by me none occurred under 25; there were but three under 30, aged 25, 28 and 28 respectively. The greatest number of cases will be found between 35 and 55. The disease is rare after 60. The following table gives a record of all cases reported to the Health Department of the city of Louisville during the past ten years:

Age	White M.	White F.	Sex not stated.	Colored. M.	Colored. F.	Sex not stated.	Totals.
1 to 10							
10 to 20							
20 to 30	2				1	1	4
30 to 40	3		2	1	1		7
40 to 50	3		1	3	2	1	10
50 to 60	3	2			1	1	7
60 to 70		2		4		1	4
70 to 80							
Totals	11	4	3	5	5	4	32

Males. White, 11; colored, 5; total 16. Females. White, 4; colored, 5; total, 9. Sex not stated. White, 3; colored, 4; total, 7.

Aneurysm is apparently far more common in some races than in others, being very frequent and seemingly increasing in England, while it is one of the rarest affections in China, due, it is said, to the non-stimulating rice diet, temperate habits, and phlegmatic temperament of the Chinese. Prof. Hunter McGuire, of Richmond, Va., writes me as follows: "Aneurysm is much more common in the negro than in the white in my experience." Prof. Tiffany of Baltimore writes of the frequency with which aneurysm occurs in the black race. Nearly all surgeons to whom I have written and from whom I have received replies have remarked upon the greater liability of the black race to aneurysms. I regret to say that few have given any reports of cases, and that these statements are merely impressions gained from a large experience but not substantiated by statistical detail. It is certainly my own conviction that aneurysm is relatively far more common in the negro, and therefore, can not agree with Matas' statement that aneurysms are somewhat less common in the African, a fact he thinks due to their comparative immunity to gout, rheumatism and alcoholism.

TETANUS.

While tetanus is co-extensive with civilization, affecting every race and clime, it is more common in subjects living in hot climates and possessed of dark skins. Negroes, Hindoos, South Sea Islanders, Italians, Spanish and French are less resistant to the germ of Nicolaier. In this country the negro is unquestionably more obnoxious, the infant mortality being heaviest. Appreciating the indifference with which negroes treat minor injuries, and their proverbial uncleanliness, we can well understand their greater liability to infection.

The mortality among colored infants is particularly high in comparison to the white, which is explained by racial predisposition on the one hand, perhaps, and by the greater chance for infection through the cord of the newborn, cut as it is with dirty scissors, handled with dirtier hands and wrapped in unclean rags. A large per cent. of colored infants die from trismus neonatorum on Southern plantations, death usually occurring within a fortnight after birth. In the Island of Jamaica and other more Southern countries, the death rate is at times frightful, being from one-quarter to one-half of all infants born; yet the whites here do not suffer to any degree.

According to Billings' recent Census Report, there were 2019 deaths in the census year: 1238 males and 781 females. In 1880 the death rate was greater. Persons from 5 to 15 years show the highest death rate (1.74); those from 15 to 45, 1.04; and over 45, 1.42. The death rate in boys was nearly five times as heavy as in girls. There were sixty deaths in Chicago during the month of July, 1881, due to toy pistol accidents. This, I think, explains the greater prevalence in males; they are simply more exposed to accidents of all kinds and are not more liable, *per se*, to infection.

Tetanus is, or has been in past wars, frequently encountered in military surgery. English soldiers in Spain suffered from tetanus in proportion to one case in eighty wounds; and in the East Indies, in 1872, twice as often. During the civil war our troops were more fortunate. A letter just received from Surgeon Major J. C. Merrill, United States Army, and librarian of the Surgeon-General's Office, is as follows: "I would state that out of 246,712 injuries by weapons of war, 505 (0.20 per cent., or a little over two in a thousand) were followed by tetanus. I may add that over one-half of these cases occurred after injuries to the lower extremities, a fact that has been noted by several authors in other statistics. Your second question, as to the relative frequency of tetanus or erysipe-

las in colored and white troops, and also in North American Indians, can not, I think, be answered without an amount of search that would require weeks to make it valuable. Isolated cases are reported here and there, but I know of no statistics of sufficient numbers to throw any light on this matter."

The Italians, Spanish and French have suffered more in their wars than soldiers of more Northern countries with fairer skins. Sudden variations in temperature and the depressing effects of defeat, have always increased the number of cases in military surgery.

I am told by Hebrew surgeons that trismus neonatorum is more common than it should be in Jewish infants. It can well be explained, if true, by the manner of performing the ritual circumcision. The Mohel is necessarily surgically unclean and careless in performing the operation, and infection should be easier than if this function were transferred to surgical hands. I am reliably informed by one of my Hebrew medical friends of Louisville that a well-known Mohel of that city is himself infected in a serious way, and a very unfit person to officiate as he does. I am further told by Jews who were born in Russia and other countries, that an affection, which I take it from their description, must have been trismus, is quite common among Jewish infants there. The Jews are a shrewd, wideawake, sensible people, quick to see their own interests, and it is reasonable to assume that time will soon bring about a change of sentiment in this rite.

Health office.—Deaths reported due to tetanus from 1888 to 1898:

White 5, colored 3, total, 8 cases age not given; white 39, colored 16, total 55 cases over one month; white 126, colored 29, total 155 cases under one month. Total, 218 cases. Total white, 170. Total colored, 48.

VARICOSE VEINS.

Varices of the limbs are but seldom encountered in negroes. Of 23 cases of varicose veins of the legs, without ulcer, there was but a single case in a negro, a male aged 44. Of 29 varicose ulcers there was only one case in a negro, a man aged 53. Of the 45 cases there were 13 females and 32 males.

Varicose veins of the limbs are rare before 30, there being but two in the series, aged 27 and 28 respectively. Between 30 and 40 there were 4 cases, between 40 and 50 there were 4 cases, between 50 and 60 there were 6 cases, between 60 and 70 there were 7 cases, between 70 and 80 there were 2 cases. Varicose veins of the limbs are uncommon with Indians, Mexicans and Chinese.

ERYSIPELAS.

The total number of deaths due to erysipelas, in the United States Census Report just issued, was 2663. The death rate per 100,000 inhabitants was as follows: Under 5 years 31.34; 5 to 15 years 0.81; 15 to 45 years 2.80; 45 to 65 years 8.88; 65 and over 38.55. Very few cases occurred in colored persons, so few as to be of no value. A careful examination of the records of our city hospital and the Louisville Health Office shows that the disease is not so rare in the negro as many suppose. Of 79 deaths due to erysipelas, reported in the past ten years to the health department of this city, 17 were colored, which is about the normal proportion, our population being one to four.

Those who are unaccustomed to seeing erysipelas in the negro are apt to overlook it on account of the color of his skin. Sex would seem to have but little effect. The two extremes of life suffer by far most frequently, young adults and middle-aged persons having it but rarely. Erysipelas of the newborn has not been a frequent affection in Louisville, judging from records of deaths reported to the health department. In ten years there have been 11 cases dying within the first month of life; of these 10 were white.

STONE IN THE BLADDER.

Dr. George Ben Johnston of Richmond, Va., has made a careful investigation of 1068 cases of urinary calculi occurring in twelve Southern States, and finds that the negro is less immune to this affection than has been hitherto believed by many surgeons. It occurs once in every 11,732 whites, and in the black race once in 55,305. It is, then, nearly five times (4.72) more frequent in the Caucasian. Sex was specified in 708 cases, there being 691 in males and 97 in females; more than seven times as frequent in the male sex. The ages of his cases in this large and interesting series were not given, I regret to say. Gross analyzed 6042 cases of urinary calculi with reference to age, and found that:

2334 occurred from 1st to 10th year.
1079 occurred from 10th to 20th year.
513 occurred from 20th to 30th year.
353 occurred from 30th to 40th year.
422 occurred from 40th to 50th year.
536 occurred from 50th to 60th year.
587 occurred from 60th to 70th year.
201 occurred from 70th to 80th year.
17 occurred from 80th to 90th year.

It will be seen that more than one-half of all cases occurred within the first two decades of life, and that the first furnishes more than double as many cases as the second, the latter more than double the number in the third decade. The ratio is then pretty well maintained until the sixth decade, when an increase is noted; this increase to be still further augmented in the seventh decade. When it is remembered that there are relatively fewer persons living in the sixth and seventh decades, it will at once be seen that the two extremes of life, the first and seventh decades respectively, are most obnoxious to urinary calculi. Stone in the bladder occurs everywhere, affecting every race, but it is found in some countries more frequently than in others. In North America it is found most frequently in Kentucky, Tennessee, Ohio, Missouri, North and South Carolina, Virginia and Georgia. New England is relatively exempt, as are also Mississippi, Alabama, Arkansas, Louisiana and a few other Southern States. Stone is common in France, Austria, Hungary and Russia; seldom seen in Spain and Switzerland. It is also frequent in England, though less so in Ireland. It is very common in India. In China gravel and calculus are, according to Gudgeon of Pekin, among the rarest of affections. Stones are common enough at Canton, but of infrequent occurrence at other points. It has been supposed to be due to the fact that the inhabitants here live largely upon fish, but this can hardly be, as Gudgeon states that the diet, water and habits are the same here as at other Chinese centers.

Opium eating is supposed to lessen the liability of the Chinese, as a race, to stone. Certainly it is not the drinking of limestone water, as river water is universally drunk and very generally boiled before drinking. Little cold water is drunk in China. A number of my surgical friends in the Medical Corps of the

United States Army assure me that stones in the bladder and kidney are rare among the North American Indians, and the reported cases will generally be found to have occurred as a result of traumatism, a nucleus in the bladder inviting the deposition of the solid constituents of the urine around it. I have reports which justify me in thinking that vesical calculi are more common with Mexicans, one operator in the small town of Santa Fé reporting five operative cases.

STONE IN THE KIDNEY.

Practically all that has been said of vesical calculus pertains with equal force to the renal variety. The two extremes of life are most obnoxious; males also suffer about twice as often as females, some placing it as much as three times as frequently. Some excellent authorities, however, as Duplay, Reclus and others, think the two sexes equally affected. It is very certain that the disproportion which exists between the two sexes in vesical calculus does not exist here, and does occur in the former disease for obvious anatomic reasons. The short, capacious urethra of the female easily allows gravel to pass, which in the male must remain in the bladder and act as nuclei for future stones. No cases have been reported to me as occurring in the negro.

OVARIAN GROWTHS.

Ovarian tumors, cystic and solid, occur at all ages and in every race so far as I know. The more usual form of growth is cystic in character, simple or dermoid. Both varieties may be congenital, frequently are, and only await the stimulation which puberty brings to awaken them into renewed life. Therefore, while the records abound with instances of operations done upon simple and dermoid cysts in children by operators all over the world, we may say that prior to puberty ovarian growths are relatively rare. An infant four months old was successfully operated upon by D'Arcy Powers at the Victoria Hospital for an ovarian cyst containing fifty-nine ounces of fluid, reported only a few weeks ago. Hoffman reports an unsuccessful case at three months, the tumor containing six to eight pints of fluid and the solid portion weighing 2½ pounds, in all 10 pounds. Busch operated unsuccessfully upon an ovarian cyst in a child 24 months old. de Santa Anna removed a dermoid cyst in a child 1 year old, and Roehmer one from a child 20 months old, and Schwartz one from a child 4 years old. Mears, Barker and Rein have operated in cases of children under 7 years of age; while Thornton, Lucas, Hamaker, Cupples and Chenoweth have operated in children from 7 to 7½ years. Sir Spencer Wells and many others report operations in children under 10 years of age.

As to the other extreme of life, the same may be said, the octogenarian being not immune. A great number of cases have been reported in women past 70, and a reasonable number 80 and beyond. Cartledge of Louisville, recently operated successfully upon a case past 81. Hoffman reports a case at 82. But, while it is true that ovarian cysts may and do present themselves at any age, it is also true that they are most likely to develop during the sexual life of the host. Puberty stimulates not a few to rapid growth, especially dermoids; therefore, it is not unusual to find such growths under 20. They, and all other ovarian tumors, are more common, however, during the next three decades of life.

Much has been written about the immunity of the negro to cystic diseases of the ovary, yet literature teems with instances of the affection in the colored race. It is unquestionably less common in the negro, but the difference in liability of the two races which is supposed to exist by many surgeons is not supported by careful statistical data. A great many ovarian cysts in the negro, full-blooded as well as mulattoes, have been reported to me by various surgeons of the South. The records of the Health Office of the city of Louisville show that there have been nearly one-third as many deaths from ovarian tumors in the colored race as in the white during the past ten years. This would indicate them to be even more common than in the white, as the normal proportion of colored to white population is one to four; yet this is not the case, I fancy, as the discrepancy is easily explained, I think, in several ways. In the first place the colored race is less resistant to surgery of all kinds, which fact seems clearly established by Matas from the enormous experience of the Charity Hospital of New Orleans. In the second place negroes are oftentimes operated upon by less skilled abdominal surgeons and under environments less advantageous than whites enjoy.

I am, to conclude, satisfied that the supposed immunity which the negro is thought by many to enjoy does not exist, except to a limited degree, if at all; for if they were immune at one time, the immunity hitherto enjoyed, has, like unto that from malaria and yellow fever, almost wholly disappeared. The size of ovarian growths varies from a walnut to a mass aggregating a weight of 245 pounds, the largest tumor on record, removed by Cartledge of Louisville, within the year. A female laparotomist of Japan removed one weighing considerably less. Keen of Philadelphia, removed a very large tumor in a girl 15 years of age, weighing 111 pounds, the child weighing after removal, 68 pounds.

Malignant disease (usually sarcoma) of the ovary may occur. It is four times as common before the age of 15 as afterward; 25 per cent. die from any operative interference, and nearly all within a year from recurrence. Convalescence is also tedious in those who survive operation.

CONGENITAL DEFORMITIES.

Harelip, cleft palate, clubfoot, spina bifida and all congenital deformities are certainly less frequent in the negro, judging from the experience of Louisville surgeons and other practitioners in Southern cities to whom I have written. But a single case of harelip and cleft palate, both in the same individual, has been operated upon in Louisville, so far as I can learn from personal interviews with its surgeons and examination of the records of the city hospital and college clinics, for the past ten years. Clubfoot and spina bifida in the negro have never been encountered in my practice, nor so far as I can learn in the practice of other Louisville surgeons. Dr. Vance is positive that he never saw a case.

Congenital deformities of all kinds are also reported to be most rare with Indians. The only deformity reported by any of the many army surgeons to whom I have written was one case of clubfoot and a double harelip, both in Sioux children. The clubfoot was in a boy and the sex of the harelip case was not given by the reporter, Dr. William L. Kneedler, captain and assistant-surgeon, United States Army. Other army

surgeons who have answered my inquiries have all stated that they have never met with these deformities in Indians; most of them, however, stating that they may not be so rare as their observations would indicate, for it is the custom of the Indians to put deformed children to death soon after birth. The Jews, I am informed, suffer less than others from congenital deformities. The Mexicans as a race suffer more frequently than Indians from all congenital deformities, and a number of cases of harelip, club-foot, supernumerary digits, etc., have been reported to me. One family in the practice of Dr. J. M. Diaz of Santa Fé, N. M., is remarkable for each of six children having six fingers and as many toes upon each hand and foot.

APPENDICITIS.

That appendicitis is relatively a rare disease with negroes is a fact substantiated by all Louisville surgeons and others from whom I have received answers to my questions. In an analysis of 250 cases operated upon by Louisville surgeons, but 5 cases have been reported in negroes. This would indicate a striking immunity, as it shows the disease to be only one-tenth as common in the black race.

Sex.—Nearly all writers on this subject have remarked upon and tried to explain the greater frequency of appendicitis in the female. That it is more common in men none will deny. Just what the difference in liability is, it is not easy to say. Fowler's statistics indicate it to be rather more than four times as common—142 men, 35 women. In 92 cases analyzed by myself there were 58 males and 34 females.

Age.—The influence of age is not less marked than that of sex and race. The disease is common between 15 and 35. Though Hold, Villard and others report cases under 5 years of age, but few are of record, and we are justified in saying that the first quinquinnium of life enjoys a practical exemption from this affection. It is rare in the second quinquinnium, more common in the third, liability further increased in the fourth, and reaching the maximum in the fifth quinquinnial period, then declining slowly in the sixth, seventh and eighth to become thereafter a rare disease. The average age in 92 cases was 23.13 years.

I have analyzed 92 cases with reference to age and sex: Of these there were 58 males and 34 females. The ages were as follows:

	Cases.
Under 5 years (3¾ years)	1
5 to 10 "	9
10 to 15 "	11
15 to 20 "	18
20 to 25 "	19
25 to 30 "	16
30 to 35 "	4
35 to 40 "	4
40 to 45 "	5
45 to 50 "	2
50 to 55 " (51, 52 and 53)	3
Total.	92
Average age.	23.12 years.

In Fowler's 169 cases (*Annals of Surgery*, May, 1894) 142 were males and 35 females. The age of the youngest was 2.5 years, the oldest 68 years. In the youngest case the disease was tubercular in character. This was the only case occurring under 5 years of age.

	Cases.
Between 5 and 10 years	8
" 10 " 15 "	21
" 15 " 20 "	29
Between 20 and 25 years	43
" 25 " 30 "	23
" 30 " 40 "	28
Over 40 years.	16

Experience of Louisville surgeons:

James M. Holloway—"I recall but one case in the negro." Ap Morgan Vance—"Forty-four cases, one negro; average age 24." A. Morgan Cartledge—"I have operated but once on the negro in more than one hundred cases; first, second, third decade." J. Garland Sherrill—"Three cases; none in negro; aged 55, 20 and 38." H. Horace Grant—"About 5 per cent. in negro." W. O. Roberts—"About twenty cases; one in negro." T. B. Greenley, Meadow Lawn, Ky.—"Have never seen case in negro." J. R. Buist, Nashville, Tenn.—"Common from 5 to 40; rare in negroes." Hunter Maguire, Richmond, Va.—"I see very little difference in appendicitis in the two races; probably it is a little more common in my experience in the white." L. McLane Tiffany, Baltimore, Md.—"I have operated upon two negroes for appendicitis; one a male child, one a young male adult." In more than fifty operative cases I have seen appendicitis but once in the negro.

RECTAL DISEASES.

That all periods of life do not suffer from the several diseases of the rectum is apparent to every observant practitioner. Children frequently have prolapsus ani and polypi, but rarely other rectal affections. Elderly persons also enjoy a relative immunity to rectal disorders, as they suffer infrequently from the more common troubles, hemorrhoids and fistula. Cancer, to be sure, is more frequent with them, but it is, comparatively speaking, a rare disease. Middle life is the time when piles, ischiorectal abscesses, fistulæ and fissures are most prone to occur. They are all frequent. An analysis of 70 cases of hemorrhoids shows only three patients under 20 to have suffered—at the ages of 14, 18 and 19 years respectively.

Suffered in the third decennium.	14
Suffered in the fourth decennium.	15
Suffered in the fifth decennium.	19
Suffered in the sixth decennium.	19
Suffered in the seventh decennium	3
Total.	70

Sex seems to have an influence, as less than one-third were females (females 23, males 47).

Race has a more marked influence, there having been 60 whites to ten colored. As these were hospital cases where the proportion of colored to white patients was 1 to 3, piles seem to be more than twice as common in the white.

Hemorrhoids are said by army surgeons and others to be rare among the North American Indians. The celebrated authority, Van Buren, who spent some years among them, stated that he never saw a case of piles in an Indian. Dr. F. A. Winter, assistant-surgeon, United States Army, informs me that hemorrhoids are reported to be common with the Mexicans, and their liability is supposed to be due to the free use of mescal. Piles are common with the Mexicans of New Mexico where pulque is not used as a beverage, and is supposed, by nearly all of the practitioners of the Territory, to be due to the free eating of Cayenne pepper.

I am told by careful observers doing much practice among the Jews that they are, as a race, liable to rectal affections. Dr. Gerster of New York, for many years surgeon to Mt. Sinai Hospital, where the

patients are mostly Hebrews, gave it as his opinion in a paper read before the American Surgical Association, that this race frequently suffered from rectal affections. He expressed the same opinion to me personally.

Fistula in ano is just as common, or nearly so, in the colored race as in the white. An anaylsis of 43 hospital cases shows 33 in whites, 10 in negroes; normal proportion of colored to white, nearly 1 to 3. The liability of the negro to tuberculosis explains his being more frequently affected with fistula than piles. Twenty-seven of the series were males and 16 females.

Age.—The first decade, as in piles, furnishes no cases; the second but 5 cases, aged 13, 16, 17, 18 and 19 respectively.

	Cases.
The third decennium furnishes	12
The fourth decennium furnishes	10
The fifth decennium furnishes	4
The sixth decennium furnishes	11
The seventh decennium furnishes	2

Fistula is undoubtedly more fatal in the colored race. Of the fatal cases reported to the Louisville Health Office during the past ten years, there were nearly twice as many deaths in negroes, although the normal proportion of colored to white population is only 1 to 4. This would indicate fistula in the negro to be nearly eight times as fatal as in the white. The excessive mortality in the colored race can be explained by their greater tendency to tuberculosis, sepsis and syphilis.

ACUTE INTESTINAL OBSTRUCTION.

Omitting congenital malformations as a cause of obstruction, we have first, invagination or intussusception; second, impaction of foreign bodies, notably gall-stones; third, volvulus or twisting of the bowel upon its axis, said to be due to elongation of the mesenteric attachment of the gut; and fourth, internal strangulation either due to an inflammatory band, a Meckel's diverticulum, or a protrusion of the gut through some internal opening. I have only chosen to consider acute obstruction, as it would seem to have a more direct bearing upon the questions of age, sex and race.

Intussusception.—Intussusception causes at least one-third of all cases of acute intestinal obstruction. According to W. Brinton, who analyzed 12,000 post-mortem examinations, insussusception causes about 43 per cent. of all cases. Leichtenstern and Fitz place the figures at 38 per cent., others place them as low as 30. Intussusception is *pre-eminently* an affection of *infancy* and *early childhood*. L. Emmett Holt has collected 385 cases of intussusception in young children; 141 were under six months old, 89 between six and twelve months, 32 between the first and second year, 96 between two and ten years. It will be seen that considerably more than one-half of these cases occurred within the first year. It was encountered more frequently in males than in females—174 against 94. In adults intussusception is said to be more common in women than in men (Park's "System of Surgery"). At least one-half of all cases of intussusception take place at the ileo-cecal junction. Of the remaining cases twice as many will occur in the small intestine as in the colon.

Impaction of foreign bodies. — Foreign bodies, hardened feces, and especially gall-stones, may occasionally cause intestinal obstruction. From statistics, which I have carefully examined, it would seem that this will explain about one case in fifteen of intestinal obstruction. I have seen two cases caused by impaction of enormous gall-stones, both in elderly subjects (white) and in females. Occasionally an instance will be met with in a child who has swallowed foreign bodies. Cases due to fecal impaction are usually in elderly subjects, a decided preponderance being females.

Volvulus.—Intestinal obstruction due to volvulus is comparatively rare. It nearly always occurs after middle life, frequently in elderly people, and is three to four times as common in men as in women. Elongation of the mesentery, which is supposed to act as a cause, may be congenital, but is usually exaggerated late in life as a result of prolonged traction, therefore explaining the relative frequency of this affection in elderly subjects, just as hernia is accounted for in the same way.

Internal strangulation.—This variety of intestinal obstruction is the most frequent of all. It may be caused by a Meckel's diverticulum, inflammatory bands, retroperitoneal herniæ, prolapse of the intestine into an abnormal pouch, or be a form of hernia. As intussusception is closely identified with the first decennial period of life, and volvulus with elderly subjects, this variety is associated with those between the two extremes of life. This is, as we might expect, on account of occupation, exposure and the diseases to which we are liable during the active period of existence. In men it may follow appendicitis caused by a band constricting the bowel; in women it not infrequently follows pelvic inflammation.

Race.—Of 45 fatal cases of intestinal obstruction reported to the health office for the past ten years, 40 were white and 5 colored; 26 males, 19 females. This would indicate a mortality in the white race exactly double what it is in the black. (Normal population one to four).

White, male 23, female 17; color not stated 10; colored, male 3, female 2; sex not stated 1; total 56.

CHAIRMAN'S ADDRESS.

[ABSTRACT.]

Presented to the Section on Obstetrics and Diseases of Women at the Forty-ninth Annual Meeting of the American Medical Association, held at Denver, Colo., June 7-10, 1898.

BY JOSEPH PRICE, M.D.
PHILADELPHIA, PA.

In the early history of gynecology the real pioneers had not only the scientific knowledge to attain, but principles to practically apply, means and methods to adopt without the aid of precedents or the counsel of fellow practitioners. It has always been difficult to perfect and establish a procedure.

McDowell operated with a mob at his door. Nineteen and ten years before McDowell's operation William Bainham did two successful operations for ectopic pregnancy. Doubtless the success of Bainham's operation greatly influenced McDowell and was inspiration in his own heroic and successful work. Yet notwithstanding this success there was a suspension of the operation for a quarter of a century. Not again was the operation resorted to until 1843. Then by John Light Atlee of Lancaster, Pa., and John Clay of Manchester, England. To the extent to which these pioneers carried their work, we have in our own work, without material change, followed their methods.

perfecting somewhat the lessons they taught and enlarging the field of their application. Ignorance and prejudice yet face us at every turn, repeatedly opposing from sources from which we have the least right or reason to expect it. The old conflict is not yet altogether dead, buried and out of sight and hearing. Those whose courage was great, motives worthy, were abused for throwing light into the darkness in which the great body of the profession groped.

To illustrate and somewhat contrast the spirit of then and now we let Dr. Atlee speak: "It is well known that from the earliest period of ovariotomy in Philadelphia down to the present time it has been my invariable custom to invite members of the profession to witness the operation, in order that they might be able to form a proper opinion of its character and to judge of its propriety. There was not a prominent medical gentlemen in this city that had not such an opportunity. It was a rare circumstance during the probationary stage of the operation for any one to accept the invitation cordially and gratefully. Some did so coldly, as if conferring a favor upon me, others politely declined, others positively refused and emphatically condemned the operation, while others took the invitation as an insult." "Gentlemen who were old enough to witness the operation were even directly accused by their professional acquaintances of being *particeps criminis* in committing murder, notwithstanding these murdered patients recovered. Some high in the profession, against all ethical consideration, would call upon the patients who had finally decided upon the operation for the purpose of warning them against me and certain death. The colleges proclaimed fiercely against the operation as unjustifiable and criminal." Professor Meigs thus emphatically expressed himself: "I detest all abdominal surgery, I am free to say that I look upon all operations for the extirpation of the diseased ovary as not to be justified by the most fortunate issue in any ratio whatever of the cases, or in other words, not to be justified by any amount of success."

It is very good for men to be honest in their opinions, it is very much better for them, in spirit and in fact, to be right in them. Oliver Wendell Holmes has aptly said: "There can be no reason why the student of science should limit his attention to his specialty, though there is abundant reason why he should avoid any attempt to make researches over too wide a range of ground. His researches in his own special corner of science will lose nothing in value, but gain greatly, by an occasional survey of the work of others, only let him not pretend to take part in actual work in many parts of the field he surveys." All troubles to which women are subject, medical and surgical, are found within the field of the general practitioner. He should be a skillful diagnostician and should be competent to deal directly with many minor gynecologic troubles.

In the last decade the younger school of gynecologists have unfortunately lost interest or neglected plastic surgery. The great majority of them have been seized by the strange, inexplicable infatuation for the surgery of the peritoneal cavity.

The vital questions relating to plastic work have largely dropped out of the discussions of our societies, there are few recent contributions to our literature worthy careful study. Along this line we are slow in following the footsteps of the older specialists, the compeers and followers of Sims. Sims, followed by his pupils, gave his plastic operations, methods and instruments, as yet not improved upon by modification or otherwise. All know the beautiful results following careful and successful work, and fully recognize that it is not work to be done by a mere apprentice to secure desired results. The reports of vesico-vaginal fistulæ run about as follows: "Two attempts at closure resulted in benefit to the patient, reducing the size of the fistula." Distressing conditions are not corrected, because gynecologists are not giving the subject the careful study its importance demands. My own experience can not differ widely from that of many others. In a recent series of cases I had four of vesico-vaginal fistula. They were sent to me either by their friends or physician. In each case there had been three or four attempts at closure, all failures. These failures were explainable from the certain premises that the patients had not been thoroughly prepared for operation by the common methods so fully detailed by Sims and his pupils. Operations for opening into the bladder, for complete laceration of the sphincter are failures in great numbers. Some operators seem to miss the sphincter absolutely. Careful training in plastic work is of more importance than in abdominal surgery. An apprenticeship in a gynecologic dispensary gives a practical knowledge of skin diseases about the external genitals, of parasites and growths, and also lacerations, that is rarely obtainable in private practice. Simple ovariotomies are easy, compared with the delicate, tedious and difficult work of dealing with mutilations where they are extensive, where we have lacerations of the urethra, perineum, bladder and cervix, or a very common distressing disorder, uterine displacement, which received prolonged and careful attention at the hands of the early and prominent gynecologists. Of late years the preparation of the patient and soft parts for operative interference has not been sufficient. Uterine displacements were treated successfully by simple methods by the early gynecologic specialists. Hodge, Sims, Gaylard, Thomas, Albert Smith and many others of equal prominence at home and abroad, corrected the displacement or put the uterus in the normal or desired position with some form of properly adjusted pessary. Displacements are quite generally shirked or neglected. The very common office attempt at local treatment and the correction of displacement is an error and about always a failure. Both office and the run-about treatment in the whole range of gynecologic disturbances are to be condemned. Women with uterine posterior displacements should be put to bed, uterus put forward, all lacerations repaired and a well-fitting pessary placed. Many general practitioners who make no pretense of special skill or knowledge, succeed beautifully in correcting displacements; this they do by putting the patient to bed and correcting the retroversion or the retroflection by using one of the varieties of the Albert Smith or Hodge pessaries, with Gayland Thomas modification. The great, round, soft rubber rings are useless and harmful, but are in much too common use. The stem girdle pessaries are of but little value. All lacerations should be carefully repaired and posterior displacements carefully corrected before any of the usually adjusted pessaries are placed.

The rest treatment for the correction of displacements is the shortest, surest and most satisfactory. Anterior dressing of the uterus for a few days, with the

patient remaining at rest, in the Sims position, favors a very speedy recovery.

It should not be taken that there are no risks associated with these mechanical appliances. Early in the history of the use of the pessary there were numerous accidents. I have removed them when very careful dissection was required, when the patient had worn them for ten or twelve years and had lost all knowledge of their presence. I have found them deeply buried and the patient dying. No great skill but great care is to be exercised in their application. Men familiar with placing them get good results, and rarely have accidents. The statistic records of accidents have a warning in them. An eminent physician has published an analytic monograph in this relation and tabulates results as follows: "Twenty-three cases of perforation of the rectum by the pessary; 20 cases of perforation of the bladder alone; 10 cases of perforation of the bladder and rectum; 1 case of ureteric fistula alone; 1 case of ureteric and vesico-vaginal fistula; 1 case of perforation of Douglas' pouch (neither fatal); 3 cases of perforation of the vaginal wall, the extruding portion of the pessary lying in the pelvic connective tissue, and 6 cases of the entry of a vaginal pessary into the uterus."

This record sounds a warning as to the importance of care in the application of the pessary. There has been no very recent startling of the profession by the announcement that someone had invented a new pessary. It is to be anticipated that during the meeting of our ASSOCIATION there will be a very lively shucking out of new methods of procedure.

All we know of the physiology of uterine action compels us to regard the uterus and ovaries as the strongest links in the chain of woman's health of mind and body.

Be not deterred by false sentiment or the jealousies of those who would rather keep their patients in their own hands than see them cured by others from doing what we know to be our duty.

"Do we not all know by sad experience of the years of useless suffering that might have been spared, of lives that might have been saved, of the ruin of conjugal happiness that might have been averted, of material usefulness that might have been preserved had an accurate diagnosis been arrived at in the earlier stages of uterine disease and a proper line of treatment adopted.

"In prolonged disorders of the uterus, resulting in enlargement, hyperplastic deposits or a process of fibroses following on arrested involution, in those secondary pathologic conditions attending upon lacerations of the cervix, in deep erosions, in unrelieved versions and flexions, in tubal enlargements and displacements, and in chronic affections of the ovary, as sequelæ of pregnancy, we find not only these reflex conditions present, but more aggravated pathologic consequences and more serious disturbance of function." These are the mature opinions of MacNaughton Jones and other eminent English specialists and general practitioners. I strongly direct attention to this subject because it has not received the attention its importance deserves. It has had a few able and courageous champions who have had to contend against obstructions raised chiefly by members of the profession from motives which we will not attempt to analyze.

I am satisfied that many cases of nervous disorder could be averted or cured by early and careful attention to uterine and ovarian troubles and the examination of pelvic viscera. We can only clear away doubts and establish safe scientific methods by utilizing the lessons of the observations and clinical experience of men who are working among facts.

Our surgery is very much more than an art, it is also a science without limit, a science with no tolerance for obstructionists, no false deference for the venerable, that replaces the old with the better new. We are not accepting mere opinions for truths, we are demanding scientific and practical tests, that old knowledge shall pass the crucial test of modern experiment and analyses. We recognize that we have not reached the "last results," that there is enough we do not know to keep us from falling into a condition of inertia, to furnish us with extensive "happy hunting grounds." I could not refer to many of the evidences of our progress without raising controverted questions.

We have given and continue to give names to things we do not understand, we know little or nothing about. We have cancer, typhoid and puerperal fever, they are names for conditions; there we are estopped; finding ourselves face to face with the unexplained, we grope for the cause and remedy. Among the best evidences of our progress are our medical journals. They are largely to be credited with the scientific spirit, the earnestness of research diffused through the profession, they bring forward questions of direct and current interest, touch our every-day work, give those facts of our clinical experiences which constitute our best lessons, they index our progress. Our periodical literature has largely taken the place of our old text books. Our leading minds, where they have something to say, say it through our magazines, and give us the best they know. To the busy physician the JOURNAL is largely his literary world. The JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION speaks for us as an ASSOCIATION, it is our official organ, it represents our scientific spirit and activities, the results of our study and research. Through it the teachers in our colleges, the specialists and general practitioners speak. However able and enterprising may be the editor, the JOURNAL will not rise above the high-water mark of the scientific intelligence of the AMERICAN MEDICAL ASSOCIATION—the great representative body of the American medical profession—by its report of our work we will be judged at home and abroad.

In conclusion I can only make brief reference to obstetrics. It is gratifying to know that the mortality in child-bed has been greatly reduced; this is largely due, both in lying-in institutions and in private practice, to cleanliness of environment. In maternity cases it is in the great majority of instances dirt and meddlesome or unskillful instrumental interference that kills. To have skillful obstetricians, the teaching of our schools should be more thorough theoretically and practically. Our students pay liberally for their advantages and should be dealt with liberally; every avenue to thoroughness should be open to them. The professor who teaches him obstetrics should know the science and art of his subject and how to teach it. As a rule the professor of obstetrics is not an enthusiast in his line, nor does he infuse interest and enthusiasm in the student; his teaching is largely perfunctory. He teaches one subject, or professes to, while he practices another. About all of them *want to be* gynecologists and

specialists. Some of them take to neurology, which requires great versitality of genius, the art to write poor poetry and indifferent fiction. There are ample facilities in our educational centers for practical education in obstetrics; hospitals, courts and alleys are open. The student should be given that which will enable him, when he goes home, to go to work and do good work.

ORIGINAL ARTICLES.

THE QUALIFICATIONS AND DUTIES OF THE MILITARY SURGEON.

BY LIEUT.-COL. N. SENN, U. S. V.

CHIEF OF OPERATING STAFF WITH THE ARMY IN THE FIELD.

Nearly five months of continuous service with the army in the camp and field has afforded me an excellent opportunity to make a practical study of the above subject. This time was spent in Camp Tanner, Springfield, Ill.; Camp George H. Thomas, Chickamauga, Ga., and the Cuban campaign, the time being about equally divided in the different places. The first four weeks were occupied in Camp Tanner, where I assisted in the capacity of Surgeon-General of the State in the organization of the State troops. This service brought me into closer contact with the National Guard of our State than at any time before. A physical and professional examination in which I took part brought out the shady as well as the sunny side of their qualifications. The result of my experience here convinced me that the average National Guard surgeon is a faithful doctor, with more than average professional ability, but, with few exceptions, lacking the necessary military training in performing satisfactorily his administrative duties. This is a part of his education that has been sadly neglected in the past and should receive more attention in the future. Very few States make provision for physical examination of the medical officers, consequently some of them have entered the service totally disqualified for participating in an active campaign. Two of the candidates for the volunteer service from the National Guard of Illinois were rejected on this ground. The four weeks' service at Camp George H. Thomas as chief surgeon of the Sixth Army Corps opened up a wide field for extended observations in making comparisons between the work done by the surgeons of the regular army and of the National Guard. The surgeons of the United States Army are all men of superior education, splendid physical development, and those who have been in the service for several years are well versed in the routine work of the Medical Department. However, in all matters pertaining to medicine and surgery the average National Guard surgeon more than holds his own. This superiority of the National Guard surgeon over his colleague of the regular army is no reflection on the latter; it is the natural outcome of circumstances, which made such a difference inevitable. The young army surgeon has to spend many years at small and often out-of-the-way posts, where the opportunities for clinical experience and intercourse with professional colleagues are necessarily limited. He naturally soon falls into the monotonous and routine work of the post life, with little or no inducements to continue his post-graduate, scientific and medical studies. When the time comes to pass an examination he wakes up from his lethargy sufficiently to go through the different compends to prepare himself for the coming ordeal. He breathes easy after he has reached the major's rank, as this promotion forever closes the door of the much-dreaded green room. From now on he is in the line of slow promotion without any extra exertions on his part. He receives his salary and looks confidently for assignments to posts where he can spend the balance of his life in ease and luxury. He has reached a time in life when he feels that he can avail himself of the work of his subordinates without interfering with his emoluments or his position in social and military life. He is conscious of the fact that he has reached a rank and a station in life where it is proper for him to look to his assistants to do the drudgery which he had become accustomed to in the past, and begin to enjoy the life before him. It is different with the military surgeon taken from civil life. He emerges from the turmoils of family practice. From the day of his graduation he has tasted the bitter fruit of active competition. His work has been watched with an envious eye and subjected to sharp criticism by his neighboring colleagues, old and young. He felt from the very beginning of his professional career that success depended upon his own exertions. The average American practitioner is a hustler. He is willing to work night and day to gain a lucrative practice and the social position which goes with it. With few exceptions he knows that what he has learned in college is but the entering wedge to a comprehensive knowledge of the practice of medicine and surgery. He knows that our profession has become a progressive one. His college education tells him what is new today will be old tomorrow. He looks with pity on his colleagues, advanced in years, whose language and practice convince him that they have fallen into a dangerous rut. He reads the numerous medical journals, the great avenues of recent medical literature. He spends his scanty income in purchasing new books and instruments for scientific investigations. All requisitions are made on himself and are honored only by writing his own checks. He joins medical societies, large and small, and attends their meetings regularly. He listens intently to the reading of papers and discussions to increase his store of knowledge and returns to his limited field of action better prepared to battle against disease. He mingles freely with the members of his profession, always ready to absorb and digest new ideas. He makes frequent pilgrimages to his alma mater or some post-graduate school to familiarize himself with the most recent advances in medicine and surgery. Social life has no attractions for him; he has entered the profession for the sole purpose of becoming an influential and successful practitioner. This is the kind of material our National Guard surgeon is made of. No wonder he outweighs the professional military surgeon in practical knowledge required in the treatment of injuries and disease.

The exacting and often onerous duties of the military surgeon in times of war require special qualifications to prepare and fit him for his work. He is not only expected to be well versed in theoretical and practical knowledge of everything pertaining to the practice of medicine and surgery, but he must be endowed with qualities both of mind and body upon which he can rely when engaged under the most trying circumstances. In field work he has often to perform the most difficult tasks with very limited

resources. In such instances good common sense and deliberate action go much further in accomplishing what is desired than the finest scholarship and the most profound logical reasoning. The man who can in a few moments extemporize a well-fitting splint out of the simplest materials and perform with the contents of an ordinary pocket case the most difficult operation will do vastly better work on the battlefield than most professors of surgery and the most brilliant operators in civil practice. The surgeon who understands the principles and practice of good cooking is of more service to the troops than the one who can repeat, word for word, the contents of the most exhaustive treatise on materia medica and therapeutics. The medical officer with a full knowledge of hygiene and sanitation and endowed with the faculty of making a rational, practical use of it is preferable to the most expert clinician, as in military practice it is more important to prevent than to treat disease, no matter how successfully and scientifically the latter may be conducted. The all-around medical officer must be a good mechanic; he should know how to use the carpenter's and blacksmith's tools, how to row and sail a boat, how to make a raft and occasionally he will have reason to be thankful if he has learned how to pack a mule and drive an ambulance team. His

Transfer of wounded to the hospital ship *Relief* at Arroya.

miscellaneous knowledge of matters and things entirely outside of his legitimate province will be constantly drawn upon from different sources and the more he knows and is willing to impart the more he will be useful and popular. The man who enters the medical department of the army under an impression that he is only expected to treat wounds, set broken bones and prescribe for the ordinary camp ailments makes a serious mistake and will be surely a disappointment both to himself and to those he is expected to serve.

Physical condition.—The ideal military surgeon in possession of the necessary mental and physical qualities to make him so is seldom seen. The most active brains are often found in a frail body. I have often seen in civil life surgeons of great reputation struggling with disease or its effects, or the victims of some congenital or acquired defects, who were wonders in the operating amphitheatre in spite of such disability. I have seen more than once the saddest of all spectacles in professional life—a surgeon, himself the subject of an incurable disease, muster into service every particle of his reserve strength to perform a critical operation with a view of saving the life of another. Achievements of this kind are possible in private practice but are entirely out of the question in military service. The physical condition of the military surgeon must be as nearly perfect as possible. A physical examination as thorough and as painstaking as in the case of a private can only decide upon the necessary physical qualifications of candidates for commission in the medical service. For good reasons this rule is followed in the selection of medical officers for the regular army and there is no ground why the same requirement should not be exacted in the National Guard. During my service at Chickamauga and in the Cuban campaign, I saw more than one volunteer surgeon who ought to have been excluded from the service for physical disability. During a campaign the loss of a single medical officer may prove a great disaster. Of all commissioned officers the surgeon is the most indispensable. The vacant place of a line officer can be filled at a moment's notice without any serious loss to the service; not so with the surgeon. His position is one requiring special training and one that can not be filled without crippling the medical service at some other point. For this, if for no other reason, the medical officer must

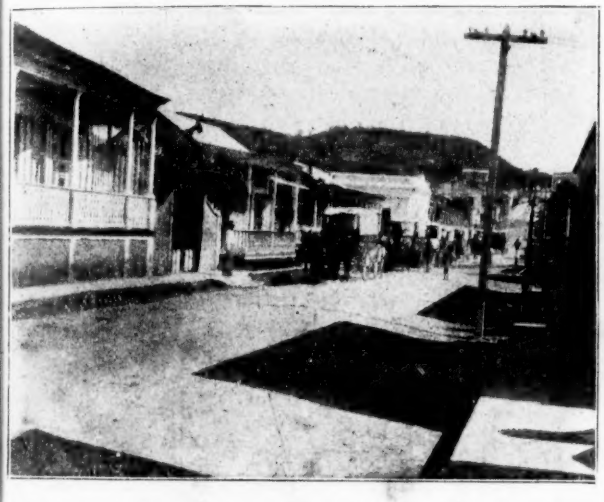
The Spanish military hospital in Ponce, Porto Rico.

be in sound health and able to cope successfully with the hardships of a campaign. In battle, and during the prevalence of an endemic or epidemic disease, the medical officer is the one above all others whose strength and endurance are taxed to their utmost extent. His services are required by day and by night. He has no rest, and unless in possession of an iron constitution, his strength fails him and he becomes, if not a fit subject for the hospital, at least a physical wreck, who, if he persists in continuing his work, will often do more harm than good. A number of such instances came to my personal notice during the Cuban campaign. A medical officer should not only be in full possession of health and all that this implies, but he should have been in training to endure hardships of all kinds from early childhood. He need not necessarily be an athlete, but he should be able to walk twenty miles a day or ride forty without fatigue and then be ready to do a night's work should an emergency demand it. The dancing halls and club houses are poor training schools for a successful military career. The labor and hardships

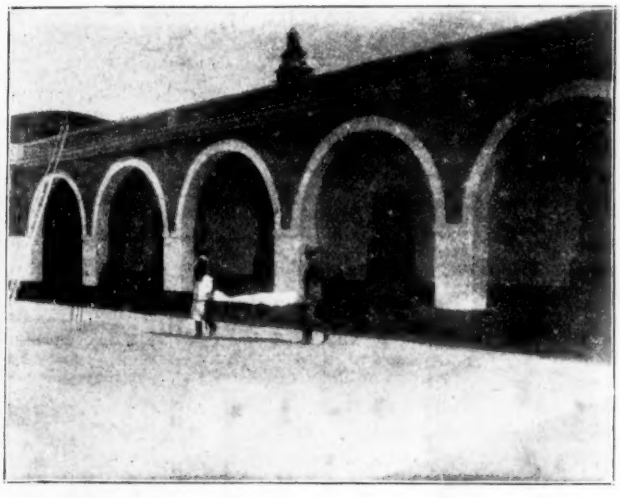
encountered in hunting are best calculated to prepare the body for a life of great activity and privation. Frugal living will not only prove conducive to the maintenance of health but will be the best means of initiating the surgeon to the uncertainties of the commissary department when on the march or in the field.

Let every one who chooses the military career dispense with unnecessary clothing and luxuries during early life in order to accustom and adapt himself for his life work, which in time of war will bring the inevitable amount of viscissitudes and even suffering. The medical officer must be a good horseman, which here not only implies a good rider, but a knowledge of the usual ailments of horses, the treatment, feeding and care of the animals. To sum up, the military surgeon must be a man of vigor, made so by birth and training, with as few requirements in his habits of living as possible, in order that he may resist to the highest degree the influences of climate and disease and prepare himself for the hardships and privations incident to active warfare.

Mental qualifications.—A proper and adequate preliminary education is exacted of every surgeon in the regular army; without it he is not permitted to pass the medical examination. Statistics show that a large percentage of the candidates are dropped at this stage of the examination. This is a reflection on the system of medical education which continues to prevail in our country. About the only evidence of proficiency the National Guard surgeon in most of our States is required to show is his diploma. It makes but little difference when the diploma was obtained. Evidences of a satisfactory preliminary education are not required. In consequence of such an easy entrance into the medical service of our State troops, many of the men who receive commissions are illiterate. By hard post-graduate work they often become good physicians, but they seldom if ever make up for the early defects of their education, which seriously interfere with a successful military career. Is it to be wondered at that when such shortcomings are discovered by their colleagues and officers of the line, they do not command the respect their commissions, should entitle them to? The reports made out by such men speak for themselves, and appear as black stains upon the department they represent. The elevation of the standard of medical education by most of the medical schools throughout the country will gradually wipe out this blemish, but it will take many years before all of the diplomas can be accepted as sufficient proof that their possessors are entitled to recognition by the medical department of the different States. Let us hope that a speedy and radical reform may be instituted in the different States which will accomplish the desired object, and which will make the commission of a medical officer of greater import in showing a higher degree of preliminary and professional proficiency than the diploma of any of our medical colleges. This is a desideratum for the realization of which every one interested in the success and usefulness of the national guard should willingly use his influence. Fortunately, there are no specialties in military practice. The medical education of a military surgeon must be of the most liberal and broadest kind. His practice is so varied that he may have to be physician, surgeon, oculist, aurist, etc., the same day. The sphere of the regular army surgeon serving at a post includes in addition obstetrics, gynecology and diseases of children. Every military surgeon must be an expert in physical diagnosis and examination of the eye and ear. He must know something about dentistry, he must know how to extract teeth and how to put in a temporary filling in a carious tooth that can be saved. He must be familiar with neurology, the use and application of electricity as a diagnostic and therapeutic resource. In camp and field he is limited to his own resources in the diagnosis and treatment of all kinds of injuries and diseases. He must therefore be well equipped with a thorough knowledge of everything pertaining to surgery and medicine, and is often called upon to represent the different specialties. No amount of preliminary and professional education will make the military surgeon an efficient officer unless he is possessed of an inborn aptitude for the profession. He must be able to apply and make use of his knowledge. Many men of great learning never become successful practitioners. Their store of knowledge fails them when they come to apply it. The military surgeon in camp and field must be a man of quick perception. He must be able to recognize malingering as well as disease. In an emergency he must be in readiness to act intelligently at a moment's notice. Hesitation is



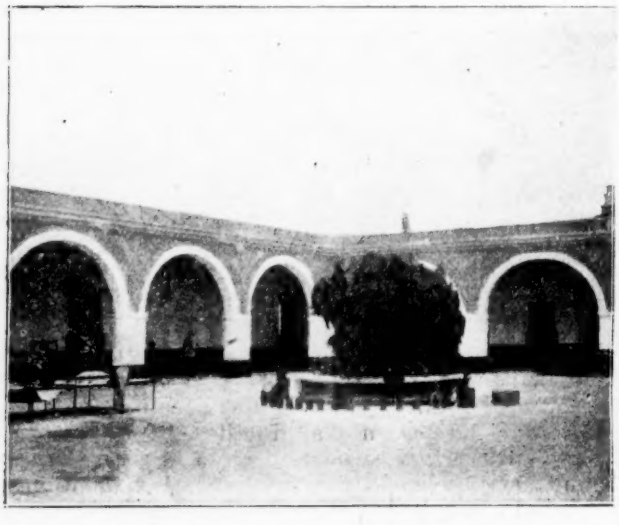
Ambulance train on the way to the hospital ship *Relief* in the harbor of Ponce.



Litter work in the court of the Spanish military hospital in Ponce.

dangerous both to the patient and the reputation and good standing of the surgeon. Indecision creates mistrust, procrastination disaster. Quick decision and prompt action are the essential prerequisites of successful emergency work. Successful action, however, must be preceded by thoughtful, systematic preparation. The most successful surgeon is the one who adopts and follows the watchword, *semper paratus*. He should never be caught napping. Careful preparation makes prompt action possible. The successful surgeon makes his plans ahead and supplies himself with the necessary outfit, medicine, dressing materials and instruments before the emergency arises, and when it does so he is fully prepared to meet it. A lack of forethought and systematic preparation accounts for many shortcomings of medical officers in the field and camp, with the necessary evil consequences for those entrusted to their care.

Military spirit.—Any one who enters the medical service of the army as a life avocation will be disappointed unless he does so imbued with a proper military spirit. The military surgeon must be a military man and an integral part of the army, if he wants to



Court of the Spanish military hospital in Ponce.

do justice to his calling and the department he represents. I fear it is a lack of the proper military spirit in some of the medical officers in the regular army that is responsible for a well recognizable cleft between them and the officers of the line and field. If this is true in the regular army, it is only too obvious in the National Guard. The rank of the medical officers and their standing in military and social circles suffer when they are regarded and treated as an ordinary doctor. The West Point graduate, educated at the expense of the government, too often forgets that it takes more hard work and a longer time to make a good doctor than an officer. The officers of the National Guard, holding commission by the grace of their governor, do not realize sufficiently that their military surgeons have spent a small fortune and five years in acquiring a knowledge of their profession. They seem to forget, or at any rate often ignore, that when they go into camp or in the field they do so at a great personal and pecuniary sacrifice. Their absence from home, even for a short time, may cause a break in their practice difficult to repair. The medical officer is entitled to recognition as a military man, and if this is not accorded to him voluntarily, he must resort to measures that will enforce it. The lack of military dignity on part of the medical staff is due largely to a lack of the proper military spirit in the members which compose it, and to too great a familiarity between the surgeons and the officers and men. The correction of these evils can not be undertaken too soon, and when accomplished will add much to the dignity, influence and efficiency of the medical department of the army and State troops.

The medical officer who has enjoyed the advantages of an early military training in a military academy or the national guard, is the one best qualified to enforce military rules and assert the dignity of his position.

Punctuality.—The busiest men have always the most time to perform a duty or to meet an engagement at the appointed time. This rule holds good in all walks of life. The drones are always behind. In military life punctuality means everything and from this exaction the medical officer should never be excluded except for special and well founded reasons. In the regular army there is a way of disciplining the medical as well as other officers in coming to time in

Transfer of patients to the lifeboat in the harbor of Ponce.

the performance of definite duties and in making out the reports. My long experience in the National Guard service has taught me, occasionally in a painful way, that the surgeons are often entirely oblivious to the matter of time, especially in the matter of making out and transmitting the regimental reports. It is the men who put off for tomorrow what should be done today, and who meet their engagements at one o'clock or thereafter instead of twelve, that render the life of their superior officers one of misery and full of disappointments. The men that accomplish the most are always ready and on time. The medical officers must be made to understand that a due regard for punctuality in performing their duties, in meeting appointments and in mapping out and forwarding reports is one of the most essential features of a successful military career.

Courage.—It is still the general belief that, in times of war the military surgeon is exposed to less danger than the soldiers and officers in command. That this is not so is shown by the statistics of all wars. Although the position of the military surgeon is behind the fighting line, he is usually near enough to the enemy when serving in the front to be

reached by stray bullets and bursting shells. The number of surgeons killed and wounded in the performance of their duty in rendering first aid is by no means small in any war of magnitude. In active warfare, however, the greatest danger to the surgeons is to be found in their constant exposure to contagious and infectious diseases, which follow large armies in all climates and during all seasons of the year. To enter a yellow fever camp, to my mind, calls for more courage than to lead and command the troops in the battlefield. Disease always claims more victims than bullets, and this is especially true of the present war with Spain. The nation worships the heroism of those who fell before Santiago, but much less is said of the vastly greater number stricken down by disease, and who have lost their lives from disease, often after prolonged and intense suffering. To the credit of the medical officers of this and other wars it must be said that they showed no fear, either in facing the enemy or what is vastly worse—disease. When yellow fever made its appearance among the troops around Santiago, every man remained at his post and faced the danger without flinching. Men from the North who had never seen the disease accepted the detail for duty in the fever hospitals without a word of complaint. The medical officer must be endowed with more than ordinary courage to face the many dangers that surround him on all sides during every campaign. Patriotism begets heroism and I make a well-founded claim for both for the medical profession represented in the army.

Personal habits.—The old adage that "It is easier to preach than to practice," is a familiar one and should be made to apply with the same force to doctors as preachers. The first and most important duty of the military surgeon is to prevent disease. This can often be done more effectively by example than by precept. The military surgeon must guard the camp against disease. He is looked upon and must be regarded by those under his care as the one above all others who can give them advice in matters pertaining to their health. He is expected to do this by example as well as precept. He must become a permanent object lesson in inculcating the importance of cleanliness in person and in dress. His tent should be the cleanest and most orderly in camp. Temperance in eating and drinking can be taught more successfully by action than by words. A military surgeon under the influence of liquor will do more harm in encouraging the vice of intemperance than can be undone by weeks of lecturing. Profanity is prevalent in every camp and while it is not the duty of the surgeon to supplant the chaplain in suppressing it, it should receive no encouragement by his example. In his conduct toward the men the surgeon should be firm and dignified, yet kind and sympathetic, especially to those in need of his professional services. An impetuous nature and an irritable temper create a rebellious spirit, which it is difficult to control by the most energetic measures. Proper questions should be answered willingly and with sufficient clearness and adequate length to furnish the desired information, and not gruffly and snappishly, as is occasionally done without any reason or provocation. Overwork and a disordered digestion are poor excuses for treating a subordinate in an undignified, ungentlemanly manner. The military surgeon must be known in camp as a gentleman, not only by the officers but by every man under his charge, if he expects to be respected and to do justice to his high calling and responsible position.

The military surgeon in war.—The true qualities of the military surgeon are crystallized and best known during an active campaign. It is in war that his ready resources will come to the surface and will be subjected to the severest tests. It is in battle and during the prevalence of devastating diseases that his moral courage and physical endurance will be most severely tried. It is under such circumstances that the troops will look to him most confidently as their protector and nearest and dearest friend. It is not in peace but in war that the bond of true comradeship becomes tighter and tighter between him and the officers and men. It is on the march, in camp, and on the battlefield that the important function of the military surgeon receives the recognition to which it is entitled. It is the wounded and the sick in a strange land that look to him for help and restoration to health. It is the surgeon who so often receives the last message of the dying.

The first and most important duty of the military surgeon during active warfare is to prevent disease and unnecessary suffering by giving early advice and resorting to timely precautions. The location of camps, policing of the same, the water-supply, food and clothing are subjects which must receive his early and earnest attention. In this work he should receive the hearty co-operation of the officers in command and if this is not the case he has the moral and military authority to demand it. It was not the medical department, but the arrogance or stupidity of the commanding general of the invading army that is responsible for the extensive outbreak of yellow fever during the Cuban campaign. This experience is sufficient to teach commanding generals that it is unsafe in the future to follow such an example, as an imprudence of this kind, giving rise to inexcusable slaughter and indescribable suffering, will meet with universal indignation. The military surgeon is in reality the family physician of the men placed under his charge. He attends to the little ailments with the same care as though he had been sent for by a wealthy family and expected a handsome fee. To be successful in the treatment of disease he resorts to the simplest medication. Complicated prescriptions are dangerous and absolutely out of question in military practice. The tablets containing drugs in the most concentrated form are a great blessing to field practice and should be relied upon almost exclusively in the treatment of disease. The remedies needed are few, and if well chosen and applied will answer all indications. A liberal supply of quinin, opium, calomel, strychnia, camphor, iron, arsenic, bicarbonate of soda and bromid of potassium will leave but little to be desired. Turpentine, castor oil, alcohol and the anesthetics are about the only fluid medicines the military surgeon has any use for. The breakage and waste in dispensing medicines in bottles are inexcusable in modern field work. Fancy drugs and preparations should not be tolerated. In the practice of surgery the military surgeon who wishes to attain the maximum success must be conservative. Strict asepsis and conservatism are the two things which are destined to make miltary surgery successful. Every surgeon must have special training in emergency work. He must be perfectly familiar with the indications and technique of every operation which may become necessary in the field. He seldom will have an opportunity to cut

for stone, extract a cataract, remove an ovarian tumor or operate for other benign and malignant growths, but he must know how to treat a compound fracture in the most modern and approved manner; he must be skillful in the treatment of wounds of all kinds, and he must be a master in performing an amputation and in ligating arteries in any part of the body. He must learn to perform all emergency operations with the simplest facilities and fewest instruments possible, in order to adapt himself in time to the exigencies of war. The surgeon who can extemporize an operating table in the field and who can secure asepsis with the use of the camp kettle, soft soap and carbolic acid or sublimate and who can perform the most difficult operations with the simplest and fewest instruments, with little or no assistance, is the one who will accomplish the most and who will obtain the best results in the field.

Ponce, Porto Rico, Aug. 8, 1898.

TREATMENT OF RETRODISPLACEMENTS OF THE UTERUS BY SHORTENING THE ROUND LIGAMENTS PER VAGINAM.

Presented to the Section on Obstetrics and Diseases of Women, at the Forty-ninth Annual Meeting of the American Medical Association, held at Denver, Colo., June 7-10, 1898.

BY J. RIDDLE GOFFE, M.D.

PROFESSOR OF GYNECOLOGY NEW YORK POLYCLINIC; VISITING GYNECOLOGIST TO CHARITY HOSPITAL, ETC.

NEW YORK, N. Y.

Dr. Howard A. Kelly, at the recent meeting of the American Gynecological Society at Boston, announced in a discussion that he had collected a list of forty-five different operations that had been suggested for the relief of retrodisplacements of the uterus. Accepting this statement as true, what more suggestive fact could we have of the importance in which this affection is regarded by the profession, or of the assiduity with which the profession has devoted itself to its relief?

Much has been learned regarding the dynamics of the female pelvis, but much still remains to be discovered. Plates representing saggital sections of the female pelvis taken from frozen sections have been transmitted from one generation of text-books to another, and the errors therein depicted have likewise been transmitted from one generation of medical men to another. The section of a frozen pelvis represents the relation of the parts in that individual only, and in all probability does not correctly represent the relation of these parts during life. It is a recognized fact that the uterus rests in a position of unstable equilibrium, varying in its position with every movement of the body and with every respiration, so that the average position of the uterus as obtained after an examination of many living women is the only way of reaching a conclusion as to even a proximal ideal position. A great advance was therefore made in definite knowledge upon this subject when an investigation was instituted for the purpose of more positive information by examining *living* women, while standing in an erect posture. By this method of investigation it has been reliably determined that when a woman is upon her feet, and that is the position in which all great effort is made and the forces brought into play which tend to retain or remove the uterus from its normal position—it has thus been determined that when the body is in an upright posture the uterus normally rests upon its anterior face and is suspended in a cradle or sling of tissue reaching from the symphysis pubis to the sacrum, known as the vesico-uterine ligaments in front, and the utero-sacral ligaments behind. The uterus is steadied in this position by the broad ligaments, reaching from either side of the pelvis to the uterus, and the round ligaments, which tend to restrain the uterus in its anteverted position, and indirectly to support the broad ligaments.

Accepting, then, the broad principle that Nature is consistent in her work, and applies to the uterus the same mechanical principle that she utilizes in supporting all other organs of the human body, we must conclude that the uterus is supported by ligaments.

The uterus itself is not an organ of any great weight and requires only delicate structures to retain it in its proper location in the pelvis. It is, however, subjected to intra-abdominal pressure which must be counteracted. Let us see, then, how this is accomplished. Resting as it does, upon its anterior surface, or in other words, having its anterior face looking downward, it receives the intra-abdominal pressure expended in the pelvis upon its posterior surface. If then the sling of tissue which sustains the cervix high in the hollow of the sacrum is sufficiently strong to retain it in that position, all intra-abdominal forces impinging upon the uterus tend to force the fundus still farther to the front, and so help to maintain its normal anteverted position. We must therefore look to the tissues between the cervix and the sacrum, viz., the utero-sacral ligaments, as the chief factor in maintaining the anteverted position of this organ. If for any reason these ligaments become over-stretched or relaxed, so that they lose their contractile powers, the entire uterus settles in the pelvis, and the cervix swings correspondingly to the front, thus preventing the resultant of intra-abdominal forces from carrying the fundus to the front until this stretching process has reached such an extent as to actually permit them to impinge upon the anterior segment of the uterus and eventually carry it into a position of retroversion. In this process all of the ligaments gradually become relaxed as the strain is put upon them until not only one or two, but all of them lose their tone, and the uterus becomes hopelessly displaced. Such, to my mind, is the rational explanation of the etiology of this affection. In a normal unimpregnated uterus the round ligaments alone may be relaxed to any degree you choose and the uterus will still remain in place; the same thing may be said of the broad ligaments; but once you relax permanently the utero-sacral ligaments, and you at once set in motion the process that eventuates in retroposition.

The most frequent cause of this relaxation is undoubtedly the absence of prompt and efficient involution following parturition. Next in order of causation, I place prolapsed and diseased appendages, which resting upon these structures and becoming adherent to them, so interfere with their nutrition that they eventually relax and allow the cervix to swing to the front. Another and not infrequent cause is the presence of a fibroid tumor located near the uterine insertion of the utero-sacral ligaments.

The condition of retroversion and retroflexion is not confined however to married women. In single women especially in cases of congenital retrodisplacement the etiologic factor is also to be found in the cradle

or sling of tissue reaching from the symphysis pubis to the sacrum, but instead of being posterior to the cervix, the cause of displacement is to be found in the vesico-uterine ligaments, and more especially in the manner of their insertion into the uterine tissue. Reynolds of Boston, following Foster and Ranney, and Hart and Barber, has called attention to the fact that the method of attachment of the tissues about the cervix is an important element in retaining the uterus in its normal position. For example, the anterior position is maintained by the tissues in front of the cervix being inserted into it at a higher level than that at which the tissues posterior to the cervix are attached. If, for any reason, by an anomalous anatomic arrangement, the tissue in front is inserted at a lower level than the tissue behind, the natural pull of these ligaments tends to throw the fundus backward. This condition is exactly the one that is so often found in congenital displacements, and in fact in all retropositions of the uterus as found in unmarried women, and probably the majority of these are congenital—that is the cervix being in the axis of the vagina and the anterior wall extremely short, showing that the utero-vesical ligaments are inserted very low down. This principle has been taken advantage of by Reynolds of Boston, in an operation for the relief of this condition in virgins, in which he simply detaches utero-vesical ligaments from their low insertion and stiches them to the anterior face of the uterus at a little higher level. He reports a number of cases in which he has applied this treatment successfully. This certainly seems a most rational procedure.

In accordance with the dynamics as previously explained, however, the most rational relief of retrodisplacements is to be found in some operation which will shorten or restore to their normal condition the utero-sacral ligaments. An effort has been made to accomplish this by some German operator and also by one or two surgeons in our own country, but the difficulties of reaching these structures, either through the abdominal wall or per vaginam, are so great that thus far no satisfactory results have been obtained. It is my belief, however, that in shortening these ligaments is to be found the proper method of treating these persistent cases. Next to the utero-sacral ligaments the most rational structures to be utilized in an operation for the relief of this condition are the round ligaments. While the functions of the round ligaments, are to direct and limit the excursions of the fundus from its normal position, rather than to sustain the weight of the organ and resist the pressure upon it, nevertheless experience has shown that they are quite equal to the latter offices, at any rate for a sufficient length of time to allow the utero-sacral ligaments to regain their function.

Today by far the most popular operation for the cure of retroversion, and the one most frequently employed by operators throughout the country, is either the original or the modified Alexander operation. The objections to Alexander's operation, however, are many: 1. It has a limited field of application, being restricted absolutely to cases in which the uterus is perfectly movable and the appendages free from disease. Such cases in my experience constitute but a very small proportion of those requiring relief. 2. The round ligaments can not always be found at the external ring. In this connection it may be noted that a number of cases have been reported in which an anomalous insertion, either into the fascia about the internal ring or at the outer border of Poupart's ligaments has been found. Moreover, in many instances the ligament is so frail in this part of its course, that it does not withstand the strain necessary to draw it out of its bed and breaks in the procedure. 3. The operation necessitates two incisions and two objectionable scars in the abdominal wall. 4. The operation in the hands of every operator experienced in this procedure is followed by hernia in a certain percentage of cases.

In order to extend the field of application of the Alexander operation so that it might include cases of retroversion with adhesion and with diseased appendages, Drs. Wylie and Dudley of New York, and Dr. Mann of Buffalo, have suggested and put into practice a method of shortening the round ligaments within the pelvis through an incision in the abdominal wall. The procedure in the hands of these three operators differs only in the manner in which the ligaments are doubled back upon themselves. The results, however, have been satisfactory, and the operation is still practiced by them all. The objection to it, however, is that it necessitates a laparatomy with all its attendant discomforts and possible hernia, and in simple, uncomplicated cases is altogether too serious a procedure for so simple a condition. Other operators, in their endeavor to avoid laparotomy, have opened Douglas's pouch through the vagina; broken up the adhesions, thus setting the ovaries and appendages free; and then shortened the round ligaments at the external ring.

As this operation which I am doing has to deal with the round ligaments, I have expended most of my time in discussing that structure as the natural support, without entering upon the relative merits of abdominal fixation, which I believe has a certain field of application, although a limited one.

With the work of these operators in mind the idea naturally suggested itself of opening the peritoneal cavity through the anterior vaginal fornix, breaking up the adhesions, restoring the uterus to its normal position and shortening the round ligaments through the one incision. This has been found a perfectly feasible procedure, and has met with such success at my hands that I have ventured to urge its adoption in all cases of retro-position of the uterus, whether simple or complicated.

The technique of the operation is as follows: After rendering the parts thoroughly aseptic, curetting the uterus and packing it with iodoform gauze, the cervix is seized by a vulsellum forcep and dragged down to the vulva. A transverse incision is made just in front of the cervix through the vaginal wall, as in the procedure for vaginal hysterectomy. The bladder is then stripped from the anterior face of the uterus and the finger pushed through into the peritoneal cavity. Grasping the edge of this transverse incision near its middle point by two artery clamps, the anterior vaginal wall is put upon the stretch and the longitudinal incision is made in the anterior wall throughout its whole extent. The bladder is then dissected off the vagina for a distance of half an inch either side of this longitudinal incision. The purpose of the latter incision and the separation of the bladder is to secure sufficient room through which to work. The dissection is done almost entirely with the handle of the scalpel and the finger, and the hemorrhage is inconsiderable.

The finger is now passed over the uterus and by

careful but persistent efforts the adhesions are broken up, both those to the uterus and those to the appendages. By hooking the index finger over the broad ligament near one cornua of the uterus, the latter organ is gradually delivered into the vagina. The ovaries and tubes are readily drawn down afterward, where, in full view and of easy access, they can be treated in whatever way may be indicated. The diseased portions of the ovaries may be resected, portions of the Fallopian tubes removed, or the appendages of one side may be removed and conservative work done upon the other side, or if the appendages of both sides are found hopelessly diseased, they and the uterus can be easily removed.

The proximity of the horn of the uterus to the vulva enables a ligature to be applied about the appendages and as near to the fundus as may be desired. After the appendages have been cared for, the round ligament, first of one side and then of the other, is caught by an artery clamp from one to one and a half inches from the horn of the uterus and dragged down in the form of a letter "U." In this position a fine braided silk ligature is passed through the ligament at as remote a distance from the forceps on the outer side as will allow approximation when it is passed through the ligament near to the horn of the uterus. It is then tied, thus shortening the round ligament to an extent equal to the length of tissue taken up in the loop. Two other smaller sutures are passed between this one and the forceps, and finally a third one, catching the tip of the loop and attaching it to the anterior face of the uterus just at the origin of the round ligament. The horn of the uterus thus treated is allowed to resume its position in the pelvis, the other horn of the uterus drawn down and the round ligament of that side treated as in the first instance. The uterus is then allowed to take its normal position of anteversion, and the bladder tissue that was dissected from the uterus is adjusted in its original position. The tissues are not sutured to the uterus, but a running catgut suture is applied through the extent of the longitudinal incision. The vagina is then comfortably packed with iodoform gauze and the operation is completed. In cases of congenital retroversion not only are the round ligaments shortened by this operation, but uterine insertion of the utero-vesical ligaments is carried up on the anterior face of the uterus and the abnormal anatomic arrangement previously described is thus remedied.

The commendable feature about this operation is its wide application. Simple retroversion of the uterus can be relieved by the application of a properly fitting pessary, and it is a question whether the condition demands the application of any surgical procedure beyond that. The circumstances of the individual case, however, must determine action in that direction. The chief point of attention is the complications attending this condition. Through the anterior vaginal wall all complications can be readily dealt with; from the simple removal of diseased appendages throughout the whole range of conservative procedures, and even to the extent of myomectomy for small fiboids and ovarian cysts of all kinds. During the past winter I have operated upon cases of retroversion with fixation, complicated by simple cysts of the ovary, by purulent cysts of the ovary, by pyosalpinx, and in one instance by a dermoid cyst containing about a quart of material.

Now as to results. The total number of cases submitted to this operation is thirty-one. The first operation was done in March, 1896, and the last done in May, 1898. In all my cases of simple retroversion treated in this way the results have been entirely satisfactory, not only in the anatomic cure, but also in the complete removal of all symptoms. Of these cases there have been six. I have had one case complicated by a dermoid cyst and five cases complicated by adhesion, club-shaped Fallopian tubes and cystic ovaries. In all these cases the ovary has been resected and the Fallopian tube amputated. In all the other cases the appendages of one side have been completely removed for destructive diseases of those organs, and in about one-half of them conservative work has also been required upon the remaining appenages. Of these cases, one patient from whom the appendages of one side were removed became pregnant shortly after the operation and was delivered of a healthy child in September, 1897, after a period of five years' sterility. This patient has been examined by me since and the uterus found freely movable and in perfect position.

A second patient, in whom conservative work was done upon the appendages of one side, the appendages of the other side being healthy, after a period of four years' sterility and intense suffering, became pregnant shortly after the operation, and since my arrival in Denver I have learned through my assistant that she has been delivered of a child weighing nine pounds and that she has passed through this gestation with greater comfort than any of the three previous ones.

A third patient is now pregnant five months. In this case the appendages of one side were removed and the round ligaments shortened as usual. She reports no unusual symptoms during her gestation up to this stage.

As to absolute and partial failures. After having done the operation a number of times, it occurred to me that perhaps it would be an improvement upon the usual method of shortening the ligaments to free the ligament from its bed, double it upon itself and then allow it to retract beneath the peritoneum. To accomplish this an incision was made through the anterior face of the broad ligament just over the round ligament, and an aneurysm needle passed underneath the round ligament and slid back and forth to free the ligament from its bed. The ligament was then drawn out, doubled upon itself and stitched, and allowed to retract beneath the peritoneum.

In the first case this maneuver was attended by some hemorrhage, but not enough to deter me from applying it a second time. In the second case, however, a hemorrhage occurred, not alarming in its extent, but most persistent in its character. This hemorrhage came from the blood vessels accompanying the round ligament in its course. After trying various methods of controlling the hemorrhage without destroying my work, I despaired of success in this way and concluded it was best for the safety of the patient to at once remove the uterus, which I did. That was the only case in which any hemorrhage, even of an annoying character, has attended the work. It was due to the modification which I adopted and which was promptly abandoned.

In the cases in which it became necessary to remove the appendages of one side, I endeavored to economize time by drawing up a loop of the round ligament of that side and including it in the common ligature. In accordance with my custom, I use

catgut ligature, and have had the mortification of discovering that in two of these cases, two months after the operation, the ligament of that side has given way and the uterus has swung around to the opposite side in a position of partial retroversion. Both these cases, however, had suffered from persistent irreducible retroversion, and since this accident have both been completely relieved by the insertion of a retroversion pessary. Hereafter I have decided not to include the round ligament in the ligature applied to the appendages, but to go through with the routine process of shortening the round ligament upon that side as well as upon the other. By doing so I believe that the accident referred to can be avoided. All of the other cases have been completely relieved of symptoms, and when last seen were anatomically cured.

The more experience I have with the operation the more satisfactory it becomes. In not one of the cases has there occurred a single complication in the process of convalescence. There has been no shock, no temperature. The after-treatment is extremely simple. The vaginal and uterine gauze is removed upon the fourth day, and thereafter no further treatment is required except a daily vaginal douche.

DISCUSSION.

Dr. ALBERT GOLDSPOHN, Chicago—I congratulate the doctor on the commendable work he has been doing in this direction. The efforts of attending to the indications for pathologic conditions in the female pelvis through the vagina, originated, we may say, with Duhrssen, Mackenrodt, Aug. Martin, of Berlin and others, and are somewhat repeated in the operation described here. I have done the same operation about a dozen times without difficulty. I consider it a feasible operation, and certainly one to be esteemed above those other unsurgical procedures which need to be relegated to the past. I mean ventrofixation, vaginofixation and ventrosuspension. These procedures are repugnant theoretically and practically to surgical instinct, and I am surprised that people of so much scientific common sense as the Germans should be the fathers of these procedures. We need such loans from the domain of pathology, for some extreme cases of prolapse, for instance. I will not totally condemn any one thing that was ever done by rational physicians with repeated success.

Doctor Goffe is not entirely correct in placing the symphysis pubis at a lower level than the tip of the coccyx in the standing woman. That is an error. The dynamics with relation to the genital organs as stated by him are in the main correct. But intra-abdominal pressure must be carefully defined if we would escape objections from our opponents in this question. The reason why I have not more frequently done vaginal shortening of the round ligaments, or vaginal fixation of the round ligaments, as now done chiefly by Wertheim, of Vienna, is because we need to adopt a different plan in our indications for operating for displacements of the uterus and its appendages. The reason why so many cases are not wholly well that have been properly treated as far as the operation went, in restoring the uterus alone to normal position, is because the same treatment was not extended to the adnexæ also. The majority of retroversions of the uterus have such conditions of the adnexæ that they require conservative operations as the Doctor has suggested. But the reason the ovaries became so diseased in a large proportion of cases is because they were previously displaced; they were away from the lateral normal location against the pelvic wall; they had migrated toward the median line of the pelvis and to a far lower plane; where they were subjected to traumatism between the uterus and the rectum, as well as to the evils of venous hyperemia. The uterus when retroverted is crowded on to the displaced ovary by abdominal pressure. If, then, the displacement led to the disease in the ovary, we need to correct not merely its condition, but above all, its position also. We must do something with the displaced ovary after we have resected it, secure it in normal position. This requires good access to the lateral walls of the true pelvis, which is not at all obtainable by any vaginal incision. For this can only intensify the ovarian displacement, but not correct it. For that cardinal reason, I can not make use of the vagina anywhere near as frequently as I would. The principle the Doctor states of the sacro-uterine ligament maintaining the equipoise of the uterus in normal anteversion is correct, although the numerical proportion of inefficiency of the sacro uterine ligaments, as stated by him, is too great.

Dr. HENRY P. NEWMAN, Chicago—I was highly pleased with the paper and with the stand taken by Dr. Goffe. Ten or twelve years ago, when this work was advanced, particularly the round ligament operation, we had very few that would sustain us in our work, many members of the profession believing it to be visionary and work that would only last for a short time. At the present time it is highly commented upon all over the country. The objections, however, that are met with even today that deter many physicians from adopting the round ligament operation are, I believe, simply faults in technique. By making the primary incision over the external ring, thereby finding a ligament that is well developed, when it is drawn out it is the abdominal portion of the round ligament. The abdominal portion of the round ligament is a different structure, is of different size, more stable and decidedly a better support than that of the inguinal canal portion of it. Moreover, the inguinal canal portion of the ligament when drawn on stays in the old operation; that is, by being stretched it is frequently attenuated, is reduced materially in size, and is not the intra-abdominal ligament at all. It does not accomplish much in bringing and holding the uterus forward, and consequently the operation is a failure. If the round ligament is drawn out on a line with the attachment of the uterus, you are sure of drawing out the part of the ligament which needs to be shortened, namely, the intra-abdominal portion. This much and other points in relation to operating upon the external ring are features that I brought out some ten years ago, and have adhered to with most satisfactory results, and those gynecologists who have followed this method of operating have been equally well satisfied. I do not think, as the Doctor stated, that the etiology of displacements of the uterus is confined to these two ligaments. I refer particularly to congenital cases so called, or cases that are really faulty at puberty. The uterus at birth in these cases is uniformly an infantile organ, but after puberty an arrest of development means under all circumstances a puerile condition of the organ. There may be a long cervix, and a fairly well developed fundus lying upon a conical cervix. This is a factor in producing displacements.

Dr. HOWARD A. KELLY, Baltimore—I naturally feel interested in this discussion, as I have operated a great many times for these conditions. I believe no surgical operation will restore *ad integrum* these tissues and the uterus where they were before. If this is not accomplished by plastic operations and rest preventing a tendency to descensus, then the question is one of the best surgical operations from a mechanical standpoint. I believe all these operations should be supplemented by restoration of the floor of the pelvis. I do not believe that the round ligaments support the uterus. They are always found kinked in abdominal operations and hence can not be supported. With the uterus retrodisplaced, the abdominal force increases the trouble, while if the uterus is anterior it increases the anterior displacement. A thread applied to the fundus holds it in this normal position and the pressure then falls upon the posterior surface. The floor should then be restored. I have operated through a one and a half inch incision over four hundred times, and only about 2 per cent. of the cases relapsed. About twenty of the women have become pregnant. All are doing well but one, and in her case agglutination occurred. Fixation is not the proper procedure for these cases; it is suspension that is required. None of the cases died. Severe pain has not been noted in any case. I do not include the fascia or muscle in my stitch, but only the peritoneum and subperitoneal tissue.

W. B. CRAIG, Denver—I would like to say a few words in support of the Alexander operation. I have had no experience with vaginal fixation, but have performed the Alexander operation in nearly a hundred cases. I have been looking for some of the accidents and dire consequences which I read of in the medical journals, and I am glad to say to you that I have been disappointed. I know of no case of hernia following any of my operations, and I kept track of the majority of my cases. No dire consequences have followed from infected ligatures, or cases of sepsis from any cause. In a body of this character these operations are purely technical. If we are attempting to instruct the general practitioner, who is rapidly becoming accustomed to surgical work, both special and general, then the matter takes on a different aspect. Any surgeon or student with a little preparation can do an Alexander operation with comparative safety; but it takes an expert to do a vaginal operation, especially of the nature of those described here this afternoon. Of course, the old method in the Alexander operation has been discarded. I do not believe the time will ever come when abdominal section will be

absolutely without mortality. This operation (the Alexander) has practically no mortality. In my series of cases I have had possibly one case of recurrence of displacement. Dr. Kelly struck the keynote when he said that anything that will hold the uterus forward for a short time until we get what is known as involution or reduction in the size of the organ will effect the purpose. It is much simpler to make an inch and a half incision in the groin than in the belly, as we do not have the risk of adhesions, of volvulus and other occurrences which occasionally follow the most careful abdominal operation.

S. C. GORDON, Portland, Maine—There are two or three points in connection with Dr. Goffe's paper that I wish to touch upon. I doubt very much the proposition made by Dr. Goffe that the utero-sacral ligaments have much to do in supporting the uterus. It seems to me the broad ligaments have very much more to do with supporting the uterus than anything else. In relation to the support of a uterus which has a certain amount of descensus, it seems to me that we must have something at the top in one way or another to hold it forward. The only exception I would take to Dr. Kelly's method is that I would use catgut instead of silk, feeling sure then that I would have nothing which was going to act as an irritant and produce trouble afterward. After all, if union of the peritoneal surfaces is desired, it may be obtained by good catgut, and you have an absorbable material which is taken care of; so that between Dr. Kelly's operation and the operation for shortening the round ligaments, I should confine myself to those two, and should always do them through an abdominal opening. I am not much in favor of vaginal operations for remedying or treating these conditions. We can treat these conditions so much better through a small abdominal opening than by resorting to the long process described by Dr. Goffe. I do not like it, but Dr. Goffe does, I have no doubt. I do believe, however, that through a small abdominal opening we can get at things and do them much better; we can do conservative operation upon the ovaries and tubes and put them up where we want them. But it seems impossible to me when we resort to the vaginal operation. Then, again, no vaginal operation can be done without resulting more or less in the formation of scar tissue which may become a source of pain. So the point is this with me: Abdominal section with fixation or shortening the round ligaments by either the Dudley or Mann operation, Mann's preferably, fix the uterus forward a little while and the thing will take care of itself.

Dr. HENRY O. MARCY, Boston—At one time I was very enthusiastic in regard to the Alexander operation. I was one of the first surgeons in this country to adopt it and have had considerable experience with it, and have utterly abandoned it. It is a popular operation with us in Boston; but as I have seen so many cases of hernia that have presented themselves to me after this operation, I am compelled to believe that it is the exceptional operation that we should do. It may be advisable to do it under certain conditions, but the surgeon must know the condition of the pelvic structures. We know that in the vast majority of cases there is something besides the mobility of the uterus with which the surgeon has to deal, and that something is an unknown factor unless we open the abdomen. For years I have adopted the method of opening the abdomen, as advocated by the last two speakers, determining the factors with with I had to deal, and instead of using silk, as I believe Dr. Kelly does, I use the animal suture on either side close to the cornu of the uterus, making double fixation. I believe Dr. Kelly puts one suture into the fundus and another a little posterior to it. There is considerable advantage in placing sutures on either side; it does well in my hands, and whatever means we resort to we should be careful as to the other factors, to-wit, the endometrium, the cervix, the perineal structures, and look after the circumferential factors as well as the one condition of malposition of the uterus proper.

Dr. CHARLES I. BONFIELD, Cincinnati—In regard to the etiology of these cases, it seems to me Dr. Goffe has very much exaggerated the rôle the utero-sacral ligaments play in supporting the uterus. If any of you will take a case where the uterus is in its normal position, pull it down to the vulva, and take pains to introduce the finger into the vagina and feel where most the traction is made, you will find it is not altogether in the posterior cul-de-sac.

Another point is the normal tone of the structures that hold all the abdominal organs in place. Most of you must have observed cases of slight ventral or inguinal hernia in which it was considered unnecessary to wear a truss; and yet when these patients became run down in health and the tissues became lax the hernia gave much more trouble. When their health was improved again their hernia practically disappeared. I have had cases that have gone on for five or six years without a truss who had worn it for years. The become ill with pneumonia or typhoid fever, and again the truss has to be worn. This is a factor which should be considered in treating uterine displacements.

Dr. MILO B. WARD, Kansas City—I can not see how it possible for us to make such a bugbear of entering the abdomen and dissecting the vagina, bladder and uterus with perfect impunity. It seems to me, every case of retrodisplacement or of retroflexion can not depend upon the utero-sacral ligaments. A retroversion may do so, but certainly not retroflexion. If you put your finger in the cul-de-sac of Douglas the uterus will fall back quickly if you do not keep there. The utero-sacral ligaments have nothing to do with Every case of retroflexion is pathologic only when adherent some condition of the appendages holding it there or a fibro in that portion of the uterus lying next to the cul-de-sac. we must do something with the appendages in all cases. The being true, we must go into the abdomen. I can not, I am sure, go into the vagina as the essayist can and bring forward adherent appendages by looping the finger over the fundus of the uterus, because I find in hysterectomy, while I have gotten the position before and behind me and have every opportunity to get in behind the uterus, I use a hook to bring it forward; I can not do it with my finger. If we operate through the abdomen, which we ought to do in nearly all cases, we can shorten the round ligaments as it is done in New York and other places, or as I have done it in my operations I loop the round ligaments to the anterior aspect of the uterus thereby shortening them. This can be done in a minute or two with kangaroo tendon; it is perfectly safe, and holds the uterus a short time until the pubic bone becomes stiffened and it remains as long as you want it. I do not believe the Alexander operation is applicable in these cases, because if we do the operation at all, we are doing it on a case that is not very pathologic, for the reason the uterus is movable, and pessaries will act as well as an operation and are certainly much safer.

Dr. WILLIAM H. HUMISTON, Cleveland, Ohio.—As I stated year ago, I have not used the Alexander operation, for the reason that if we have disease of the adnexa the case can be cured without that operation. If you have a misplaced organ for number of months or a year or more, if the diseased condition is continuous, there is a change in the tubes and ovaries, as by bringing the uterus forward, after having curetted the diseased mucosa and reduced the size of the uterus, it will remain in place if supported six or eight weeks by a pessary. The majority of cases of retrodisplacement of the uterus only exist for a short time and can be cured simply by placing the uterus well forward and supporting it for a few weeks with a pessary, then the pessary can be removed and the uterus will remain in place. If you have changes in the adnexa, then the uterus is liable to go backward again. Therefore, in the Alexander operation you have a movable uterus; you must have the appendages healthy or the mere shortening of the round ligaments is not going to relieve symptoms. If you have displacement with healthy adnexa, the Alexander operation is not indicated, and mild curetting and placing the uterus forward are sufficient. In cases where we have diseased adnexa, I open the abdomen for the purpose of examination. I anchor the uterus forward, and use kangaroo tendon with which to hold the uterus to the abdominal wall. I do not scarify. It will hold the uterus there sufficient length of time for the adhesion to take place. It is elastic and it will relieve the case.

Dr. W. O. HENRY of Omaha—I can hardly agree with the essayist regarding the anatomy that he gave either as to the position of the symphysis pubis when the patient is standing or as to the importance of the attachments, both anterior and posterior.

In regard to the operation of Dr. Goffe, I should say it is a difficult one, and an unnecessary one as a rule. Personally I prefer to open the abdominal cavity and attach the uterus after the manner recommended by Dr. Kelly, by the slender peritoneal attachment, and I think the remark he made should be emphasized, because I believe there are many cases in which bad results have occurred after ventrofixation. In such operations as ventrofixation, where the peritoneum is scarified, we get an absolutely immovable uterus. But when a silk ligature is introduced through the entire thickness of the abdominal wound, you get a strong enough peritoneal tissue to hold the uterus in place. Where there are no adhesions and the peritoneum is all right, where the uterus is not necessarily laterine no operation is needed. In many cases the uterus can be replaced and patients cured of their trouble by the use of a suitable pessary. I believe in the use of the pessary in such cases; but where an operation is necessary I still believe in operating by the abdominal method. I open the abdomen

attach the uterus by two ligatures to the abdominal wall. If you have two ligatures within each other you are likely to get a dropping into a little nook a piece of omentum or bowel, strangulation taking place, and necessarily you will have to reopen the abdomen. A single ligature for suspending the uterus will generally answer in the majority of cases.

Dr. GEORGE J. ENGLEMAN, Boston—The subject under discussion is a very broad one, and we all have our preferences. My own preference has been to attempt to restore normal conditions as far as possible, and not to replace one fixation by another, and, of course, fixations are now largely given up, likewise suspension. We must all yield to Dr. Kelly's success and the number of his cases. From close observation extending over quite a long time we must all admit that fixation is injurious unless it is resorted to in older women, where possibly the appendages have been removed and prolapse has occurred. I have seen a number of cases in which the delicate ligament has been stretched four or five inches or more, and yet it did not accomplish the object. If the good is accomplished in a given time, say in two or three weeks, I have no doubt the ligament holds. But frequently it is elongated more and more, and unless the normal conditions are restored, the operations are failures. I have preferred the shortening of the round ligaments with the restoration of other co-existing conditions. It has appeared to me that if we repair an old door we must repair the hinges, not nail it down either open or closed, but restore it as far as possible to normal conditions, and for that reason I prefer the shortening of the round ligaments through an abdominal incision in order to deal with the appendages, which in so many cases are at fault.

Dr. JAMES H. ETHERIDGE, Chicago—I have finally settled down for the past three or four years to abdominal fixation. Personally, I think there is very little difficulty in doing an operation through an inch or an inch and a half incision. As to ventrofixation, I have done many operations of this kind with only one abdominal suture. I suture through and through the abdominal wall, and one intra-abdominal suture is all I generally use in doing this operation. I have observed throughout this discussion that but very little allusion has been made to Dr. Goffe's paper. I am very glad to have heard Dr. Goffe's paper, because it is something new, and I want to hear what he will have to say three or four years from now. I still think I shall continue to do the abdominal fixation operation.

I am very much impressed with Dr. Ferguson's idea of suspending the uterus in this way. I cannot but believe that something will occur in loosening the stumps around the ligament, and they will slip back into the abdomen, one side or another. He says that is the fault of the operator or in the technique of our operations. If that occurs, he is hopelessly in the minority in the way of getting a reasonable expectation of good results from it.

Dr. JOSEPH PRICE, Philadelphia—In regard to the precise position of the ligature in these operations by Dr. Kelly, it has been disputed thrice or more by good men practicing the operation, each criticising one another's technique. One inserts the suture at the fundus or posterior to it, and the other a little more anterior. Thus, a paper was read by Dr. Ashton, one by Dr. Penrose, and I think, a third by Dr. Noble, each differing in the mathematical degree of position of the ligature.

Dr. JAMES H. ETHERIDGE, Chicago—I understand Dr. Kelly uses silk, and Dr. Gordon catgut. I have always used silkworm gut, leaving it in three weeks, taking out the abdominal stitches at the end of eight or ten days, and leaving the through-and-through silkworm gut stitches in three weeks. From past experience I have had in digging out silk material and other things from sinuses, I have gradually given up the idea of leaving a fixed suture in the uterus.

Dr. C. E. RUTH, Keokuk, Iowa—I have had considerable experience and some disappointments in trying to relieve uterine displacements. I think a pessary has its place in suitable cases. Had I known what the condition of the uterine adnexa was, I am quite sure I could not so well deal with the adnexa through the incision which Dr. Goffe makes as I could through an abdominal incision. I have done quite a number of ventrofixations that were very unsatisfactory, so far as relief from the symptoms was concerned for which the operation was done, and I have practically abandoned the operation for a year and a half, not believing that it should never be done, but I have not found a case in that time in which I thought the operation was indicated. I have since done it a few times, but very much dislike to substitute one pathologic position for another. I am very slow indeed to believe that all cases of uterine retroversion and flexion are pathologic and demand treatment. I believe we will better subserve the interests of our patients and own reputations if we make a small abdominal incision, and be certain as to the existence of a pathologic condition of the uterine adnexa. As to leaving unabsorbable materials in the abdominal cavity, I am less and less in favor of it as the years go by.

Dr. JOSEPH EASTMAN, Indianapolis—There is one point that was touched upon by the last speaker and Dr. Etheridge with reference to leaving material, such as sutures, which is not absorbed, and which I think is important. Silk, for example. Recently Dr. Tait has abandoned using anything else but silk. For a number of years I have boiled my silk, and then added quite a strong solution of carbolic acid to it. I have no trouble in digging out silk, and I think Mr. Tait resorts to a similar method. I do not think we should abandon silk altogether in our intra-abdominal work.

Dr. A. H. CORDIER, Kansas City, Mo.—I desire to offer a mild protest as to the ease with which the essayist would have us believe that this operation can be done through the vagina. I feel very much safer to make a small incision in the abdomen, open from above and remove the adhesions. While I use silk in all my abdominal work in the peritoneum, the placing of the silk ligature is an important thing. If the silk ligature should become infected at any time in the future in the position here (illustrating), it would find its way out through the bladder two or three months later if buried in the tissues. That would be a serious objection to the use of the buried silk suture in between the uterus and bladder itself. I would also disagree with the position of Dr. Ferguson in regard to making three openings in the recti muscles, because he takes a portion of the round ligament that stretches during pregnancy, shortens it up, so that he has nothing but two stumps to the abdominal incision, and as pregnancy advances these little stumps will not stretch like a ligament which is seven inches long running from the tubes up through a canal that is movable. The Doctor will find that this will be a serious objection to the use of the operation he has so beautifully illustrated with his diagrams today. Dr. Goffe has presented a most excellent paper, but I wish to protest against the idea that it can be done easily with the adhesions separated and the uterus placed forward in position in a mass of intestinal leaks that will require possibly a future operation to repair.

Dr. A. H. FERGUSON, Chicago—I believe Dr. Goffe speaks of his method as a new operation. I think if the literature is thoroughly gone over he will find that this is not correct, and in the absence of Dr, Byford, I wish to say that he presented a paper in which he described this same operation, which he does through the vagina. It was described several months ago in Chicago. In reply to Dr. Cordier, I wish to say that there is a distinction between stretching and hypertrophy when pregnancy takes place.

Dr. ALBERT GOLDSPOHN, Chicago—In regard to the question of priority of vaginal shortening of the round ligament, I beg leave to say that the first man who did it was a German in Dresden, whose name I can not recall. It was then done by Wertheim of Vienna, from which we Americans have it. Dr. Byford of Chicago was the first man probably in the West who did it after those gentlemen.

Dr. JOSEPH PRICE of Philadelphia—Dr. Kelley in his remarks spoke of pregnancy occurring in 5 per cent. of the cases in which he had corrected displacement of the uterus, or 20 in the 400 cases treated by him. The percentage of pregnancy following the old-fashioned simple methods of correction of uterine displacement was much larger. Dr. Bantock records a case returning from Africa to London for the correction of a posterior displacement thrice. Thrice a pessary was replaced and thrice she conceived. That has been my experience in several instances. I am very old fashioned, quite as much so as Emmet, in efforts at correcting displacements of the uterus by old-fashioned simple methods. I am not willing to admit for a moment that Hodge, Smith, Hewitt, Gaillard Thomas and others of the old school of gynecologists were fools and false in their statements when they told us they used pessaries successfully. Many of these displacements of the uterus can be relieved by the application of suitable pessaries. While I have the reputation of cutting almost everything, I want to take this opportunity of correcting that error. The character of suture material that we should use in our surgical work is very important. I have removed great quantities of it. Two or three days before leaving home I removed ligature material for three consecutive days from one patient. This was a doctor's wife who had suffered the tortures of the damned for some days, and I found her uterus held down with guy ropes that Dewey ought to have to tow some of his monarchs with. (Laughter and applause.) I have released more ventrofixations than I have ever done. I have been repeatedly told by husbands that their wives got out of bed

every half hour or so for a year or more; but by putting them to bed, freeing the uterus, omentum and bladder, and possibly removing a dead ligature, they have gotten along nicely.

In all fairness to Dr, Goffe, I wish to say that his paper is a scientific one and the fixation of the uterus in the anterior vault is one that in all probability will give less post-operative annoyance and sequelæ than others that have been so long practiced. The criticism offered with regard to the ease of the operation are like those of vaginal hysterectomy. It was a long time before physicians recognized that vaginal hysterectomy was an easy operation. It was really unfortunate they discovered it was an easy one, and yet it has taken the profession many years to recognize that fact.

Dr. GOFFE (closing the discussion)—I have very few remarks to make. A great many points have been suggested with which I do not agree, and while I should be glad to answer them in detail, I am afraid it would take too much time of the Section to do so. We are all agreed that a simple retroversion of the uterus is not so serious a condition as to require an elaborate surgical procedure for its relief. I believe we agreed, too, upon the point that it is only in certain selected cases that we advise patients who suffer in this way to undergo operation. As to the use of pessaries, my experience is that when a pessary is properly applied promptly after confinement, while involution is going on, the ligaments recover themselves sufficiently to retain the uterus in place. But in chronic cases of retroversion and retroflexion pessaries only afford temporary relief. Shortly after removing the pessary the condition is reproduced. That has been my experience, as well as the experience of men of wide observation. If we carefully look into the literature of the subject we will find that it is the experience of men who have kept watch of their cases most carefully, that only about 5 per cent of them that submit to pessaries are cured.

We all agree that in these cases the indications for operation are to be found in diseases of the appendages. Granting that is so, to reach the appendages we must open into the pelvic cavity, and the question resolves itself into the abdominal or vaginal route of entrance, and that is a question, I believe, that is going to be fought out in the next few years, and I believe the consensus of opinion to be in favor of the vaginal route. My own opinion at the present time is, and my own conduct in these cases, is never to do a laparotomy if I can avoid it. If I can in any way relieve a patient by vaginal incision instead of a laparotomy I always do it. I believe this is going to be the practice of the future. With regard to the length of time it is necessary to retain the uterus in an anteverted position in order to recover itself, and why it recovers itself I believe that if we can retain the uterus in an anteverted position for a certain length of time by something that does not impinge upon the utero-sacral ligaments as a pessary does, we allow the utero-sacral ligaments to recover themselves, to regain tonicity, the muscular tissue contracts, and as the utero-sacral ligaments recover themselves the uterus is retained permanently in place. The slight adhesions to the peritoneal membrane do not take the weight off the uterus; they do not overcome intra-abdominal pressure but simply direct the axis of the uterus, and we have done that in its proper channel, as indicated upon the board. We have intra-abdominal pressure carrying intra abdominal pressure forward.

In regard to the priority of the operation, I do not claim priority for this procedure. Wertheim of Germany has suggested it and practiced it; but before he published his paper, and before Dr. Byford published his paper, grounded on the same idea, I did my first operation, and while Wertheim has priority for publication in Germany, and Byford priority for publication in this country, about which I do not care, I am certainly entitled to priority for having done the operation in this country before it was published. It is my wish to bring this operation before the profession more pronouncedly than it has been done heretofore, with the hope of inducing some of you to adopt it. I shall do the operation tomorrow morning at 7:30 at the County Hospital in this city. I do not know how serious the operation may be, but it is a case which has been saved for a few days with the idea of doing an Alexander operation. I shall be glad to demonstrate to you the facility, ease or difficulty with which the operation can be done. I do not claim it is a simple operation. It is one that takes time and patience; but the results of the operation through the vagina are so satisfactory that I can highly recommend this procedure.

Police Reports.—The recent Latin-American Scientific Congress at Buenos Ayres passed a resolution urging the daily press to refrain from publishing police reports as "there is overwhelming evidence to show that they are direct incentives to ever-widening circles of suicide and crime."

DESCENSUS AND SUSPENSION OF OVARIES.

Presented to the Section on Obstetrics and Diseases of Women at the Forty-ninth Annual Meeting of the American Medical Association held at Denver, Colo., June 7-10, 1898.

BY A. GOLDSPOHN, M.D.,

Professor of Gynecology Chicago Post-Graduate Medical School; Senior Gynecologist to the German Hospital; Attending Gynecologist to the Post-Graduate and Charity Hospitals.

CHICAGO.

The medical profession has during the last two decades been more especially interested in the *exciting causes* of disease, the infections, and the ravages of these microbic invasions. The transcending value of the conquests in this direction amply explained and justified this tendency. But we are finding out that the infections, after all, are generally playing only a part, and, in some cases, a small part, in the aggregate causation of many diseases. We recall the tenets of our fathers who spoke of *predisposing causes* and find that these are just as prevalent in our day. Within the female pelvis and abdomen these causes are created mostly by displacements of the internal generative organs, with the consequent embarrassment of their circulation and impaired trophic conditions. As pertaining to the uterus, this fact has been recognized for a long time by the majority of gynecologists and general practitioners, and it explains the modern operative zeal for the cure of uterine displacements that is noble in its purpose, but very unfortunate in the choice of some unnatural methods (vagino- and ventrofixation or suspension). But that descensus (badly called prolapse) of ovaries is a positive and potent pathologic factor, that it constitutes a large part of the aggregated evils in cases of retroversion of the uterus, that it justly demands permanent correction by suspension of each ovary so affected approximately in its normal position in conjunction with every surgical invasion of the pelvis that makes it possible and that, in the presence of such displaced ovaries, entrances to the pelvis for other causes should be so chosen as to make it possible to discharge this duty toward the adnexæ also—these are facts that need to be insisted upon and reiterated, not merely for general practitioners, but also for the majority of gynecologists.

The normal location of the ovary in the living woman was ascertained by Bernhardt S. Schulze,[1] the father of bimanual palpation, the one only searchlight in ordinary gynecologic diagnosis; and the clinical views of this ideal gynecologist were subsequently substantially confirmed by the anatomists Hasse,[2] Kölliker,[3] His,[4] Waldeyer[5] and Vallin.[6] During more recent years this topic has been invested with more practical interest than ever before, and it has been the subject of extended anatomic investigation, more especially by Aug. Martin[7] and Dr. Hammerschlag,[8] a student of Waldeyer. Minor differences of opinion still exist between the opinions of some investigators as to the exact location of the ovary; but they relate only to unimportant features, as, for instance, does the ovary lie more upon the anterior or the posterior part of the lateral wall of the true pelvis? Does it lie in a fossa, either specially designed for it, or resulting from indentation? But they agree in all important points—that the ovary lies against the lateral wall of the true pelvis, a little beneath its brim, and is sheltered by the tube and its mesentery (ala vespertilionis) arching over it. It rests approximately in the

obturator fossa (Waldeyer), being suspended against the lateral wall of the pelvis, with its long diameter parallel to that of the body in erect posture, by means of the suspensory (spermatic) ligament attached to its upper pole, the ligamentum ovarii proprium connecting its lower pole with the corresponding cornu of the uterus, and by its hilum a sesile insertion of its straighter edge into a projecting niche upon the outer part of the upper surface of the broad ligament. Its free border, which is thicker and more rounded, is directed in an inward and posterior direction. While we are compelled here to omit extended details of anatomy, we note, however, two very important practical facts; 1, that the ovary is suspended within the true pelvis, nearly as high on either side, and nearly as far away from its median line as possible, and 2, that it will be acted upon by intra-abdominal pressure chiefly in a centrifugal direction, tending to support rather than to dislocate it.

Nature of descensus.—There are two degrees or stages of descensus ovariorum. In the first degree the ovary is arrested in its descent by the sacro-uterine fold or ligament of the same side, and lies against the side of the supra-vaginal portion of the cervix and body of the uterus, in what Waldeyer calls the fovia retro-ovarica, and what Coe[9] and others call the retro-ovarian shelf. In this location it is readily felt by the vaginal finger in the posterior fornix of the vagina in bimanual palpation. In the second degree the ovary has passed over the sacro-uterine fold and then descends to the extreme bottom of Douglas' cul-de-sac, where the finger in simple vaginal palpation meets it at once, almost before coming in contact with the cervix. While both ovaries are not infrequently decended to the first degree, particularly when associated with an old and extreme reversion of the uterus, it is rare that both of them lie together in the bottom of the cul-de-sac. Probably on account of the sigmoid flexure, the left ovary is the one which descends by far the most frequently in both stages, and it is usually the one found in extreme descensus (or prolapse). In 77 cases of ovarian descensus Mundé[10] found the left one alone displaced 46 times, the right 19 times, and both together 12 times.

Causes.—Aside from various upward, inward or backward displacements which the ovary experiences from neoplasms arising from the uterus or the broad ligament, it undergoes a downward displacement—which is here alone considered—from three different classes of causes.

1. Those which occasion an abnormal or disproportionate increase in its weight, as *a*, inflammatory processes due to direct local infection or to systemic infectious diseases, especially typhoid and scarlet fever, variola and influenza; *b*, multiple cystic degeneration of Graafian follicles and corpora lutea.

2. Relaxation of the ligamentary supports of the ovary, *a*, by enfeebling or wasting diseases (occasioned partly, perhaps, by the associated loss of fat from the tissues); *b*, subinvolution during the puerperal state, after they have undergone a physiologic and somewhat proportional elongation during gestation; *c*, elongation of its ligaments, particularly of the lateral or upper suspensory ligament, by vicious traction made upon them during conservative surgical work upon the tube or ovary through an opening into the peritoneal cavity, that does not admit of sufficient access to the lateral wall of the pelvis. This is the case sometimes when a very small median ventral incision is made in corpulent women; and it is always so in any form of vaginal celiotomy (Sanger),[11] which is an eligible operation for extirpation of adnexæ, but not for conservative work upon them, because their displacement—which in many cases led to their diseased condition—is not remedied, but aggravated by it.

3. Finally and chiefly, retroversion and retroversio-flexion of the uterus are responsible for downward and inward displacement of ovaries, more than all other causes put together. The statement of H. T. Hanks[12] that 33 per cent. of all cases of such uterine displacement are accompanied by a descensus of one or both ovaries to at least the first degree, is a very moderate one. And the fact that they are not so displaced already in every case of retrodeviation of the long uterine axis does not argue for the innocence of the latter, because descensus of ovaries associated with a normally anteverted uterus occurs in only about 2 per cent. of cases that are not influenced by pelvic neoplasms or tubal swellings of any kind. It could not be otherwise, as the anatomy of the parts indicates. The utero-ovarian ligament (lig. ovar. proprium) is a firm, round, comparatively unyielding, fibro-muscular cord (Luschka)[13] enveloped by peritoneum and only 2.6 cm. long. The other supports of the ovary, the hilum and the upper suspensory ligament, are little more than duplicatures of peritoneum containing areolar connective tissue, but practically no fibrous or muscular elements, and are therefore very yielding in character. They allow the ovary to ascend in the abdomen, with the fundus uteri during gestation, and to follow it at close range in all its voluntary or forced excursions in the pelvis.

Harmful factors incident to descensus.—These are, first partial venous stasis, and second, mechanical traumata.

1. As the ovary descends its venous current is obstructed by traction and torsion exercised upon its hilum; for the displacement occurs not merely by a sliding movement, but by a tipping over or rolling inward and downward (Sanger).

2. *Traumata from the uterus and rectum.* Although intra-abdominal pressure is everywhere equal and therefore affects all intra-peritoneal bodies from all sides alike, nevertheless, during coughing, sneezing, vomiting, and other straining efforts, as at defecation, there is a marked temporary and physiologic recession of abdominal viscera into the pelvis, that occurs by virtue of proportionally greater power vested notably in the diaphragm and other muscles in the upper part of the abdominal parietes. The consequent reduction in lumen of the abdominal cavity and temporary downard recession of its viscera is the domineering feature of intra-abdominal pressure in the pelvis. It is the sovereign factor in emptying the rectum; it is the greatest force exercised in the second stage of labor; it sustains the uterus in normal anteversion or holds it in constant retroversion acccording as it is guided forward sufficiently or not by its ligaments, and woe to the sensitive feminine testicle when it departs from its sheltered nook upon the side of the pelvis and approaches the median line of the pelvic canal where intra-abdominal pressure in this manner will be brought to bear upon it, through the medium of the rectum posteriorly, and the uterus anteriorly. The traumata thus inflicted upon the descended ovary are intensified when the body of the uterus lies retroverted, which is the case in probably 95 per cent. of

all cases of descensus ovariorum. In complete descensus at the bottom of the posterior cul-de-sac, the ovary lies as in a vise that acts irregularly, but very frequently. Every forcible exercise of intra-abdominal pressure crowds the (usually retroverted) uterus down upon it from above. Every filling of the sigmoid and passage by the rectum brings contusions from behind or below; and normal coitus is scarcely possible without bruising the usually hyperemic, edematous or inflamed ovary and causing much pain. When the ovary has descended only to the first degree, and lies backward and to the side of the uterus in the sulcus created by the sacro-uterine ligament or fold, it does not experience the traumata mentioned so directly and invariably, but, like a floating body in the knee-joint, it may be caught at any time and is compressed frequently and violently enough (Goodell)[14] to carry it beyond the domain of conservative treatment, unless it be restored to normal position permanently—with resection when necessary—before a number of years elapse.

The pathologic changes that occur in such ovaries in consequence of the constant venous hyperemia and innumerable traumata are: 1, hematomata in Graafian follicles and corpora lutea; 2, edema; 3, connective tissue hyperplasia, which is well known to result from constant embarrassment of the venous current, in other organs of the body; 4, chronic oophoritis, leading to multiple cystic follicular degeneration, usually in parts of an ovary, and cirrhotic conditions in other parts; 5, even perioöphoritis and eventually peritoneal fixation may occur without infection, according to Sanger.[15]

It is often impossible, but likewise non-essential, to determine whether descensus of an ovary, in a given case, is the cause or the result of an inflammation or degeneration of the organ. For, while it may be the entire source of disorder in the former case, in the latter it imposes insurmountable barriers to all natural forces in their efforts to establish a restitutio ad integrum.

The indication to permanently reduce such dislocation of ovaries is therefore general; and it should be done by non-surgical means when possible, and with surgical measures when necessary, especially when resection of them is also required. That ovaries so displaced, diseased, and distressing to their bearers, can by such treatment, be restored to good or relative health anatomically and functionally and, in the great majority of cases, do not require extirpation, my experience during the past five years has abundantly proven in several hundred cases. Naturally the prospect or advisability of saving these organs becomes constantly less the longer the vices incident to the displacement have acted upon them and have induced greater anatomic changes. They are also much less in those comparatively rare cases where their descensus occurred in connection with a normally anteverted uterus.

So-called medical treatment for this disorder is really effective for a few cases in that category only in which the descensus (prolapse) of the ovary is associated with a retroversion of the uterus, namely, in recent cases of this kind, following within a month or two after parturition, in which subinvolution is a prominent factor. If involution of the uterus and of the uterine and ovarian ligaments be promoted in these cases by an early restoration and retention of the retroverted uterus and descended ovaries in normal position by a properly fitting pessary, and if this be supplemented possibly with a vagino-abdominal faradic current of not more than sixty interruptions to the minute, or by massage of the uterus in anteversion, and by tonic medical treatment, then a cure of the displacement of both uterus and ovaries is here sometimes attained. In non-puerperal cases, however, usually only temporary relief is obtained by these means. In cases that are associated with a retroverted uterus that can not be brought into thorough anteversion by bimanual manipulation preferably—owing to peritoneal adhesions or infiltration in its supports—so that this invariable and absolute preliminary requirement for the use of any pessary can not be fulfilled, all local medical treatment resolves itself, among other minor agents, into the abstraction of water from the parts by from one to two ounces of glycerin (with bichlorid of mercury, 1 to 4000), applied by means of tampons of elastic (non-absorbent) sterilized cotton or wool. These are best applied when the patient is in the genu-pectoral position, and the cervix has been drawn or crowded into the sacral hollow. They may be left in forty-eight to sixty hours and should be renewed in a day or two. If no septic elements linger in the adnexæ, the tenderness may hereby be so much reduced that bimanual massage may liberate the organs and right their position so that a pessary becomes a possibility, but also a life-long necessity. But the only really effective treatment for descended (or prolapsed) ovaries, with given exceptions, is essentially of a surgical nature. And while this subject eminently deserves the careful attention of all general practitioners and medical specialists, because it furnishes an anatomic reason for many a persistent dyspepsia, vaso-motor disturbance or neuralgia, still I would address myself chiefly to those who have occasion and facilities for working in the pelvic peritoneal cavity; I would call their attention to the important duty, namely, in every instance before closing this cavity, to see to it that the uterus and every ovary that is allowed to remain is also given the most favorable opportunity to remain healthy, by securing each organ as nearly as possible in its normal position or environments by dealing with natural structures in a manner that does not disarrange the normal anatomy or disturb the physiology of these or other adjacent organs. Furthermore I would remind them of the fact that with surgical methods that are designed to rectify displacements of the uterus alone merely, we are discharging but little more than half of our duty in many cases that a nearly equal obligation frequently obtains with reference to the adnexæ, to relieve them of diseased portions (resection), or of incipient disordered conditions (salpingostomy) and to secure them in a normal location. Certainly the restoration of the displaced uterus is a most potent and unavoidable means for the replacement and retention of descended ovaries, but it is not the only or all sufficient means in the majority of cases. But a choice of a surgical method for the most frequently associated retro-deviation of the fundus uteri is necessary for the relief of the descended ovary. Vagino-fixation, ventrofixation and ventrosuspension being intrinsically very unnatural and unsurgical procedures, and giving rise to disorders in gestation and obstructions in labor on the one hand, and intestinal obstruction on the other are not eligible as normal procedures in women who retain a capacity for conception. Nor are the

adapted to serve harmoniously with other surgical acts that are demanded by descensus of adnexæ.

The most nearly ideal structures to deal with to meet the combined requirements of a retroverted uterus and descended ovaries, with certain exceptions, are the round ligaments of the uterus. These ligaments may be dealt with by three different routes: 1. *By vaginal section*, by which they may be shortened intra-abdominally or may be drawn out and fastened to the vaginal wound. This route is, however, only suitable in cases where no conservation work upon the ovaries or tubes is needed, so that they do not need to be drawn into the vaginal wound, away from their more lateral location, and then dropped into an abnormal situation. 2. *Ventral celiotomy.* This is the proper route to deal with descended ovaries, with or without an associated retrodeviation of the fundus uteri, in all cases that are complicated, not merely by adhesions, but probably also by lingering actively septic elements. After removing all depots of the latter, and thoroughly liberating all remaining parts, the uterus should be secured in normal anteversion when necessary by intra-abdominal shortening of the round ligaments, every remaining dislocated ovary should be suspended in the following manner: A full-curved cambric needle armed with fine silk, suitable for intestinal work, is passed through the web that connects the abdominal ostium of the tube with the ovary—called the ovarian fimbia—about midway between the two, and so as to grasp from one-half to one cm. of its free edge. The needle is next made to grasp a similar amount of the inner free border of the spermatic or proper suspensory ligament of the ovary near the ilio-pectineal line. Usually two stitches, about a cm. apart, are so placed and tied. In passing the needle through the spermatic ligament, it is usually well to draw out its free border with a forceps so as to avoid puncturing veins that are very prevalent in it. Thus the ovary and infundibulum of the tube are both suspended mediately in approximately normal relation to each other and without direct fixation of either, leaving to each a range of mobility. 3. By way of the *inguinal canals* and *dilated internal inguinal rings.* This is the most nearly ideal route by which to shorten the round ligaments of the uterus, and gives the least objectionable and most enduring results in permanently correcting the displacements for which it is intended, if properly performed. It is therefore desirable to treat as many cases by this modified and improved method of Alexander as possible; and, indeed, it is very serviceable, not merely for uncomplicated freely movable retro-displacements of the fundus uteri and descended adnexæ, but also for that large class of such displacements in which the formerly active septic or infectious factors have died out, but have left behind an array of adhesions about these organs and various removable deformations and degenerated portions of adnexæ. This very important work can be done by this route efficiently and safely, both as to primary and sequent developments, by cutting only skin, fat, and sometimes peritoneum, and separating all other tissues about the inguinal canal bluntly, by stretching the internal inguinal ring (which in every case must be opened to admit of a proper shortening of almost every round ligament) enough to admit an index finger, and by introducing this finger, and if necessary the next one also, through this opening, freeing the uterus and adnexæ of all adhesions or fixations and bringing the tube and ovary up into and out of the wound where salpingostomy, destruction of cystic follicles or resection of the ovary, and suspension of it, can be done singly or collectively as required, or the tube and ovary may be taken out if worthless. The internal inguinal ring is situated on a line nearly anterior to the lateral and upper suspensory ligament of these organs. Therefore, the farther or the more readily the upper pole of the ovary is drawn out the greater is the relaxation of its upper suspensory ligament, and the clearer is the indication as well as the possibility of shortening it. In this operation this is done by passing fine silk sutures around the ovarian fimbria, as above stated, and uniting this to the inner edge of the spermatic ligament well drawn out, at a point as low down in the wound as can be reached by depressing the surrounding abdominal wall.

This not very easy, but very innocent, and extremely benign work on the patients, I have gradually developed since Sept. 18, 1893, when for the first time I failed to find a round ligament in performing an Alexander operation upon a mentally deranged patient who would not admit of careful previous examination. Instead of giving it up, which I have never done, I opened up the wound into the abdomen and traced the round ligament from the uterus outward. Incidentally, I discovered a menacing tube and ovary and removed them, obtaining a good recovery of the patient mentally and physically. During the last seventeen months I have performed this extended Alexander operation thirty-six times; eleven times the simple operation was done with no intraperitoneal work upon the adnexæ aside from exploring them in each case on one or both sides with a finger introduced through the ring, and suspending one ovary in a few of the cases; thirteen times with resection of one or both ovaries, making a suspension of the latter in about half the number of ovaries dealt with, and restoring the canal of the tube in a smaller number. In twelve, or one-third of the cases, I removed the appendages of one side; and in some of these resected and suspended those of the opposite side. In an experience with about one hundred and forty cases, the Alexander operation, variously modified, has not only not been responsible for any death, nor followed by hernia or any other evil sequel; but the general average of morbidity during convalescence is much lower than of abdominal sections proper in which only the same amount of work has been done upon the same organs, but much more incidental exposure and manipulation of intestines especially was necessary. The general average of good health during subsequent years in cases of such displacements that were surgically treated upon this plan, either intra-abdominally or by way of the inguinal canals, so that not the uterus only but the ovaries also were secured in normal position is much better than of similar cases in which the uterus *alone* was formerly attended to by the same and other less eligible methods.

34 Washington Street.

REFERENCES.

1. B. S. Schultze: 1. Samml. Klin. Vorträge. No. 176, 1879. 2. Lageveränderungen d. Gebärmütter. Berlin, 1861. 3. Samml. Klin. Vorträge, n. f., No. 24. 4. Jenaische Zeitschrift, Vol. i, p. 279 (1864) and Vol. v, p. 113.
2. Hasse: Archiv. f. Gyn., 1875, Bd. viiii,, p. 402.
3. Kölliker: Sitzüngeberichte d. Phys. Med. Ges. zü Würzbürg, 1879-1880, No. 8.
4. His: Archiv. f. Anatomie ü Physiolog., 1880. Anatom. Abtheilüng, p. 398.
5. Waldeyer: 1. Die Lage d. Innern Weiblichen Beckenorgane bei Multiparen. Anatom. Anzeiger, 1886, No. 2, S. 44. 2. Kentniss d. Lage d. Weiblichen Beckenorgane, Festschrift f. A. von Kölliker, 1892.

6. Vallin: Situation et Prolapse des Ovairer. Thèse pom ledoctoraten médecine. Paris, 1887.
7. Aug. Martin: 1. Lage ü. Bandapparat d. Eierstocks C. Ruge. Festschrift. Berlin, 1895. 2. Zür Topographie d. Keimdrüse. Zeitschrift f. Geb. ü. Gyn., Bd. xxxv, p. 498.
8. Dr. Hammerschlog: Die Lage d. Eierstocks. Zeitschrift f. Geb. ü. Gyn., Bd. xxxvii, S. 462.
9. Coe: Amer. System of Gynecol., Vol. ii, p. 881.
10. Mundi: Thomas and Mundi, 1891, p. 650.
11. Sänger: Centralblatt f. Gyn., 1896, No. 9, p. 243.
12. Hanks: The Post-Graduate, (New York), February, 1897, p. 33.
13. Luschka: Anatomie d. Munschen. 2 ter Band. 2 ter Abtheilüng. "Das Becken," p. 325.
14. Goodell: Lessons in Gynecology, p. 387.
15. Sänger: l. c., p. 244.

FURTHER EXPERIENCES IN THE MANAGEMENT OF UTERINE DISPLACEMENTS.

Presented to the Section of Obstetrics and Diseases of Women, at the Forty-ninth Annual Meeting of the American Medical Association, held at Denver, Colo., June 7-10, 1898.

BY AUGUSTUS P. CLARKE, A.M., M.D.
CAMBRIDGE, MASS.

I have been prompted to present this subject on account of the misapprehension which, I believe, has prevailed respecting the character of an abnormal position of the uterus, and the method of treatment that should be adopted for the correction in certain cases.

It has been a frequent occurrence to meet with cases having a marked backward displacement where a pessary had been inserted and worn for a considerable period without an attempt being made to overcome the adhesions and to restore the organ to a position as nearly normal as possible.

For convenience in treatment, uterine displacement may properly be divided into two classes, namely: anterior and posterior rotation.

I have often found the former division to yield quite readily to dilatation and to the maintaining of the patency of the cervical canal; this can be effected by the employment of a glass drainage-tube while the patient is kept in a recumbent position. In those cases in which there is much congestion or inflammation of the uterine canal or of the tissues connected with the appendages, douches or other local applications should be used previous to dilatation and drainage.

Of the two results that follow anterior displacement, I have noticed that sterility has been the more common condition or has not been as easy to control as has dysmenorrhea.

Within the past year I have observed an unusual number of cases of sterility dependent on a preternatural closure of the uterine cervical canal. In one case my records show that the patient had some eight years before given birth to a child: the anteflexion of the corpus uteri was of the third stage, or of an angle about forty degrees. In endeavoring to effect dilatation I found that there existed much hyperplasia of the cervix, which was evidently the result of an old endometritis. An innocent-looking exudation taken from the cervix, when placed under the microscope, revealed the presence of gonococci, the existence of which must have been of long standing and must have contributed to the sterility and to the changes that had taken place in the endometrium. Dilatation of the canal, incision of the interior of its cervical portion, curettement, drainage and cauterization with a 60 per cent. solution of chlorid of zinc finally overcame the dysmenorrhea and relieved the essential symptoms.

In some instances I have found that anteflexion resulted undoubtedly from congenital causes. In very marked or aggravated cases I have observed vesical symptoms to arise. The urine may contain a muco-purulent sediment. After dilatation and other local measures have been tried, a properly fitted Hodge pessary, introduced so as to lift the uterine fundus from the bladder, afforded satisfactory relief.

As regards anteversion, I have found that condition often associated with subinvolution and therefore has been the result of pregnancy and of parturition, laceration of the cervix, and relaxation or inflammation of the uterine ligaments. Dilatation, curettement, and the direct application of iodin and of other alterative agents have proved excellent preliminary measures of treatment. The laceration of the cervix and of the perineum and also of other parts should in due time be attended to.

In two cases of anteflexion of the third degree pregnancy took place before opportunity for a systematic plan of treatment could be carried out. In one of the cases vomiting of pregnancy occurring after the tenth week became alarming; this, however, was brought under control by rest and by tamponading the vagina so as to elevate the uterus from the rectal, sacral, and vesical tissues. Such vomiting can often be relieved by the milder means used for replacement of the uterus. If, however, there are firm adhesions, as there were in a case to which I was called some months since little can be safely attempted in this respect until after the term of pregnancy has been completed.

It is sometimes said that the stimulating effect of pregnancy tends to improve the development of the uterus and thus to overcome the anteflexion. In one of my patients, notwithstanding pregnancy went twice to full term, the anteflexion recurred soon after each parturient process had taken place.

As before remarked, I have relied in the treatment of anteflexion much upon resort to dilatation, either by the gradual or by the rapid method, as the condition of the case would seem to justify. In regard to the time when rapid or more forcible dilatation should be attempted, much will depend upon the character of the case. If there is evidence of much old hyperplasia, with a preternaturally small cervical canal, dilatation should be had recourse to as soon after menstruation as it will be deemed expedient to undertake. If, however, the cervix is soft and imperfect in its size and shape and there is a tendency to menorrhagia or metrorrhagia, the operation should not be performed for some days after the flow has ceased.

In dilating the uterus I have noticed that much care should be taken not to exercise too much force in the beginning; the condition of the tissues somewhat above the internal os should not be overlooked. In cases in which there is considerable hyperplasia or induration of cervical tissue, incision of the part within the canal will be most helpful; the sudden forcible stretching of the tissues without incision is liable to be followed with delay in recovery or with other untoward results. In cases in which there is a complication of salpingitis, ovaritis, or other inflammatory processes, rest and preliminary treatment should be tried before the more radical measures are employed.

In all cases, after dilatation has been effected, the patient should be kept for a considerable period in the horizontal posture. If sterility or dysmenorrhea continue, dilatation, curettement and intra-uterine applications should be repeated at proper intervals. I have found, however, that when treatment was seasonably undertaken, favorable results in a large percentage of cases were early achieved.

In the management of retroflexion we have been accustomed to speak of the corpus of the uterus as being bent or turned backward from its original position. In this connection it might be proper to say that the cervix of the uterus is in its normal position when its axis is nearly at right angles to the axis of the vagina and the corpus inclined forward toward the abdominal wall. The degree of retroflexion may then be determined by finding the measurement of the angle that is formed by the backward displacement of the body from the internal os. We may have a retroflexion that embraces an angle varying from the dimensions of half a circle to those that are included in less than a quarter of an arc. As regards the treatment of such cases many points have to be considered. Of course, replacement of the organ must first be accomplished and its reduction must be maintained. I will not discuss the question of repair of the lacerated cervix or of an injured perineum, for we all now recognize that such cases should receive proper attention, as well as that measures should be instituted to overcome the condition of subinvolution. The cases that of late have given the most trouble have been those in which the organ was firmly bound down by adhesions, or after the adhesions have been overcome, the ligaments and other parts have been found so weakened and relaxed as to fail to act as guys in sustaining the organ in its restored position.

As we come to appreciate more and more the influence of intra-abdominal pressure in the maintaining of the uterus in its normal position, we shall perceive more clearly the reason why we have succeeded in some cases by a resort to a special method of procedure, while in other cases such operations have proved to be almost entirely useless.

Last winter there came under my care a case in which Alexander's operation had been tried some three months previously without any beneficial results being apparent. I found, on further examination, that the retroflexion was of nearly the third degree. Some dysmenorrhea was complained of, besides the effects of pelvic pressure and other annoying symptoms, the result of reflex irritation. The vulvo-vaginal introitus was relaxed and patulous. The only operation that I could recommend was Hegar's method of posterior colporrhaphy. The posterior vaginal wall was narrowed so as to overcome the patency of the vulval opening, and thus to prevent the ready ingress of air. The uterus was then kept in place by a properly fitted Hodge pessary, though the round ligaments were much relaxed, and no attempt was made to reshorten them.

I believe that Alexander's operation is the most useful in those cases in which the vulvo-vaginal wall is so intact as to be sufficient to maintain the intra-abdominal pressure. There can be no doubt that had the perineal and vaginal tissue been repaired at the same time that the operation was undertaken for shortening the ligamenta rotunda, the results, in all respects, would have been typical of the benefits that could have been achieved by necessary operative interference.

Those cases in which the uterus is displaced backward and is firmly adherent, are frequently the most troublesome to manage. Manual and instrumental interference may sometimes be helpful in effecting the proper reduction; so, also, will repeated tamponading with iodoform gauze or with prepared lamb's wool, but these procedures have many times proved to be tedious measures of treatment. In such cases, Alexander's operation will have to be deferred; this operation would be especially contra-indicated if the adnexa were prolapsed and adherent also. The course then to be pursued will depend on the amount of suffering.

If the severity of the symptoms cannot be relieved by resort to milder means, or by the recourse to the extra-peritoneal method, ventrofixation or ventrosuspension may, of course, be the next expedient. Before resorting to this measure of proceeding it is highly necessary to be certain, as it is in Alexander's operation that the perineum and vulvo-vaginal tissues are intact, and that there exists in those parts no patency that would materially overcome the equipoise of the intra-abdominal pressure.

On making an abdominal incision other factors as contributing causes of the retro-displacement may be discovered; these will have to be dealt with as may, in each individual case, seem proper. Ventrofixation as a routine method of treatment for correcting retro-displacement of the uterus can, according to the present knowledge of the results of abdominal surgery, be scarcely approved. The operation in certain cases has its peculiar benefits; in others it has its exceeding limitations. Ventrofixation or ventrosuspension, I have found, is an admirable surgical expedient in those cases in which one or both of the appendages or portions of the broad ligament have been removed through an abdominal incision; for overcoming retro-displacement in married women, I believe that it is best that the operation should, if possible, be deferred until the approach of the menopanse. If conditions admit of a choice, Alexander's operation for shortening the round ligaments in properly selected cases is no doubt the less dangerous to the patient's life and the less likely to interfere with the normal evolution of pregnancy, though I have seen a few cases in which utero-gestation, taking place at an early date after the operation, terminated about the sixth month in premature parturition.

DISCUSSION ON PAPERS OF DRS. GOLDSPOHN AND CLARKE.

Dr. JOSEPH EASTMAN, Indianapolis—I desire to thank Dr. Goldspohn for his excellent paper. I endorse every word I heard, although I did not enter the room until the paper had been well begun and the foundation had been laid. The paper certainly shows that the Doctor is studying along anatomic lines in a conservative way, and with the absolute view of effecting cures, and not for the sake of making new experiments or developing new modes of operating.

Dr. HOWARD A. KELLY, Baltimore—Some of you may recall a paper in the *British Gynecological Journal* in 1889 with reference to stitching up the ovary with its attendant prolapse. I myself have never felt perfectly clear as to the pathologic significance of those ovaries that were felt with unusual distinctness in Douglas' pouch, and I have never felt warranted in opening the abdomen for the sake of stitching up such ovaries. When I have opened the abdomen for other causes these ovaries have never appeared to be diseased; they may have had small cysts in them. I shall watch with interest the effects of operations upon descended, prolapsed, more or less tender ovaries. In the course of abdominal operations, where I have removed the tubes, and the ovaries have tended to drop back, I have pinned them to the cornu of the uterus in a number of instances. It is interesting to note the varieties or differences we find in the course of operation in the utero-ovarian ligaments. Of course, the length of the ligament allows the ovary to drop back. I have seen a case within the last two weeks in which the ligament was over two inches in length. That was in association with a tumor, which was large. When the ligament was pulled out I never saw one as long before. I have seen them short and thick. I wish to say in this connection, that a short time before I came here I saw a case where there was absolutely no utero-ovarian ligament. The appearance was curious. In opening the abdomen and exposing the

uterus, saying this *à posteriori*, the ovary was plastered right on to the uterus on both sides for about two-thirds of its surface, the scar tissue looking like skin that had been in water for some time, radiating several centimeters around. This was the only case in which there was absence of the utero-ovarian ligament.

Dr. WILLIAM H. HUMISTON, Cleveland—In reference to cases of prolapsed ovaries, I find it is a great question for me to decide as to the necessity for an operation. I do not feel clear in deciding to operate until I have gone through a course of treatment in these cases. It is rare for me to find an ovary prolapsed unless we have descensus or a retroposition of the uterus. In those cases I find that the history gives an indication as to what the result may be from ordinary treatment. If the case has existed for a long time, usually it has failed to be permanently benefited by putting the uterus in its proper position and condition. But I feel like trying the conservative method always in doubtful cases before resorting to surgical procedures. I find in a great many of these cases, if the symptoms have been only a year in duration, that they do get well by placing the uterus in its proper position and supporting it there with rest in bed, hot water douches, by glycerin pads, and with medicated boro-glycerid, or ichthyol-glycerin solution. I have never done the operation of suspending the ovaries, for after failure of the conservative method of treatment, the symptoms not being relieved to any extent, upon opening the abdomen and inspecting the appendages I find them in a pathologic condition, and then removal of them is the only thing to give permanent relief, and in those cases I have had most pronounced success. Many cases that have come to me with symptoms of recent date, say within a year, have been permanently cured by the ordinary treatment with pessary, after six or seven or ten weeks of support by pessary. The uterus remains in its position and we have no further trouble. Usually pregnancy takes place and they go on to full term without any trouble. Where the appendages are not diseased, merely congested, and the ovaries prolapsed, perhaps the conservative treatment has been usually sufficient in my experience.

Dr. E. GUSTAV ZINKE, Cincinnati—I can not believe that an otherwise healthy ovary or ovaries that are prolapsed, even though they be lying behind the uterus or in front of it, will give rise to any serious symptoms—certainly any symptoms that would in my opinion justify operative interference. This is the view which I take of this procedure. I have yet to see a single case of prolapse of the ovaries without adhesions that has given rise to such symptoms as will warrant operative procedures, except perhaps such as a patient may be put in the genu-pectoral position several times a day for as long as she may stand it in connection with the use of tampons, keeping the organs in their place as much as possible; but when I have found relief from measures of this kind, I always feel sure that whatever symptoms there were present they were not the result of adhesions, and in no case were they so severe as to justify an abdominal section for the purpose of stitching the ovary in its proper place.

Dr. J. H. W. CHESTNUT, Philadelphia—My experience in these cases coincides very clearly with that expressed by Dr. Humiston of Ohio, and Dr. Zinke. The numerous cases I have seen have been so comparatively insignificant in their ulterior influences that I have not yet been called upon to operate for removal of the ovaries except where there were evidences of intrinsic disease. The frequent placing of the patient in the knee-breast position, the retention of the ovaries in their position by tampons medicated by glycerin and ichthyol and rest in bed with the hot douche will give relief. Where there have been adhesions I have felt compelled to remove the organ. I have no doubt, however, that there are cases in which this procedure will be of value.

Dr. MILES F. PORTER of Fort Wayne, Ind.—There are certain cases of prolapse of the ovary in which we know the shortest and best method of treatment is some method of fixation or their removal. With the Goldspohn method I have had no experience whatever; but I have had some happy results from abdominal fixation of the ovaries, in cases where apparently there was absolutely nothing wrong save that the ovary was out of position—sometimes out of position one day and in position the next. A few days ago a case of this kind presented itself which had been treated by the usual method without result, and upon leaving she remarked to me that the first movement of the bowels without pain and without distress, she had for a period of eighteen months, she had had within three months after the ovary was put in position, and retained there through an incision in the median line.

Dr. CHARLES I. BONFIELD, Cincinnati—It seems to me that the experience of Dr. Kelly and of Dr. Zinke that these cases do not cause some trouble must not be the experience of the entire profession. The cases that are attended with retroversion of the uterus, and the cases that are relieved when the retroversion is relieved are amenable to the office treatment graphically described by Dr. Humiston of Cleveland. But when the ligaments of the ovary are so stretched that replacement of the uterus does not also replace the ovary, then has been my experience that local treatment is very hard to carry out, and it is almost impossible to make it effective. A great many of the gentleman have said that the ovaries, if not diseased, need not be disturbed; but it has been my experience, after watching these cases, that if I am not able to relieve them in any way, sooner or later the ovary itself becomes diseased; the malposition of it interferes with its nutrition and sooner or later we have a diseased ovary which requires its removal. The gentleman who spoke a minute ago, from Iowa (Dr. Fairchild), voiced my sentiments when he said that certain women could not afford to be treated months for their condition, such as school teachers, music teachers and clerks in stores. They cannot afford to pay money for their cure nor can they afford to rest long enough to get temporary relief. In those cases some surgical measures are indicated.

Dr. E. GUSTAV ZINKE, Cincinnati—It is possible I have placed myself in a wrong position because I was not here when the paper was read. I may not have been correctly understood with reference to what I had said before. What I meant to say was that when we have a perfectly healthy ovary, in other words, no diseased condition in the pelvic cavity, only prolapse of the ovary, that the symptoms arising therefrom can not be sufficiently severe to warrant operative interference. Furthermore, when I spoke of the genu-pectoral position for the relief of the condition, everybody knows that there are no adhesions present. The treatment need not be very protracted, and a few applications will probably be sufficient. If protracted treatment becomes necessary, it is evidence that adhesions exist, and that other pathologic conditions have arisen for which operative interference will be perfectly justifiable. I wish it distinctly understood that I endorse every honest effort. I do not know whether Dr. Goldspohn does this operation for prolapse of the ovary without any disease condition present or not. I simply make these statements in order to make myself understood. I hope if I did not make myself understood then I have done so now.

Dr. JOSEPH PRICE, Philadelphia—My experience has been instructive and interesting in this line of work, although I have not resorted to surgical procedures except in the presence of pathologic conditions. A prolapsed ovary with fixation commonly has occlusion with retention, and the same holds good with retrodisplacements with fixation. It is exceptional to find a fixed uterus without an occlusion with retention of blood, pus or water. You have alluded to the importance of surgical interference in this class of cases. For simple descensus of either or both ovaries, or the truant ovary of the Germans, we have had a great variety of treatment. I do not approve of the office treatment. It avails but little. If you are going to treat a case successfully you must put the patient at rest, and if the treatment be local and general you will succeed in many cases in giving marked relief by some of the methods recommended. The globe trotters and the class of women who do not want to be mothers, or prefer postponing the treatment of their troubles for trivial purposes or other convenience, are the ones that annoy us most. If you can convince some of these women that they should become mothers you will, in many cases, cure the truant ovary. Before leaving home I examined a patient who has not conceived for eleven or twelve years. She is living in the extreme Northwest; she was the victim of artificial methods of preventing conception, and, as a consequence, had marked nervous disturbance bordering upon insanity. I found in her case, large congested uterus and truant ovaries. I put her to bed, corrected the displacement of both ovary and uterus, and she returned eight months later to ascertain the presence or absence of pregnancy. I assured her that she was pregnant some four months or more. She went away rejoicing. We are burdened in the East by a number of cases traveling all over the world. They have an unnatural dread of having a baby, and a baby is a thing we love down East above all things.

Dr. CLARKE (closing the discussion on his part)—In most cases where we have displacement of the adnexa we have displacement of the uterus, and in my paper I spoke of the importance of intra-abdominal pressure, and I believe we should in all cases endeavor to restore that. There is a class of cases in which I think my methods of treatment should be of avail, but I have seen some cases in which ventrofixation or ventrosuspension has been undertaken and carried out with so little good effect, that I am afraid of it. I believe if the Alexander

eration is performed in a certain class of cases, and the peri-neum is intact and the subinvolution is overcome, with a le rest in bed, the woman kept in that position, we will get most a perfect cure. If we perform Alexander's operation thout restoring the parts to overcome subinvolution and thout watching the condition of the ovaries and tubes we ll meet with failure. The purpose of the round ligaments is prevent backward displacement, and to fasten the uterus to abdominal walls or to the peritoneum has, in my experi-ce, been a failure in those cases in which the tubes and aries have been removed.

Dr. GOLDSPOHN (closing the discussion)—I condemn the gical monstrosities of ventrosuspension, ventrofixation d vaginofixation. Direct or immediate fixation of the erus to the abdominal wall, without an intervening band, is serious a thing that soon it will be malpractice to perform in women who may conceive. Suspension exposes the ient to the risks of intestinal obstruction. If the bands de by these operations were the result of anything else, the erators themselves would open the abdomen to remove them. e records show that two-thirds of the women subjected to se operations have troubles in gestation or labor, or both. e harvest of ileus after ventrosuspension has only begun. e round ligaments are merely guy-ropes. Intra-abdominal ssure is the holding force that either supports the nor-lly anteverted uterus or condemns the retrodisplaced erus to remain permanently in that position. The best way correct these displacements is by means of the round liga-nts and through the inguinal canals. The cardinal points the technique of Alexander's operation are that the way the abdomen is not to be cut, but the tissues are split so t they fall together afterward; that the conservative oper-ons upon the appendages can be done through the dilated und, and that each layer must also be closed individually. least 95 per cent. of the cases of descent of ovaries are asso-ted with retroversion of the uterus, and hence the treat-nt must be directed to the displacement of both. The ecologist who knows no middle ground between amputat-an ovary and doing nothing, stands in the same position as surgeon who would amputate every diseased leg. I never Alexander's operation without curetting thoroughly and pairing the cervix or perineum, or both, at the same sitting, t all required. My technique of the operation is briefly as lows: The pubic spine and Poupart's ligament are the iding points. An incision is made half an inch above the ament, beginning near the spine, passing down to the apo-urosis of the external oblique. The bunch of fat in the ternal ring is grasped with forceps and a finger is placed in ring. The aponeurosis is then split up without being cut, is held aside by retractors; the round ligament is traced the internal ring by tearing the attachment of the deeper uscles to it, when the end of Nuck's canal can be seen. This cut slightly and a pedicle forceps is introduced and the ternal ring is stretched so that the index finger can be intro-ced. With this all adhesions to the uterus and to the tube to the ovary of the same side are severed. The ovary and be, if abnormal, are brought out, inspected and their condi-n is corrected surgically if possible, or they are removed. e round ligament is sutured to the under surface of Pou-t's ligament, in the act of closing each layer in the wound parately, and after the principle of Bassini hernia operating.

THE TREATMENT OF AMBULATORY GYNECOLOGIC CASES.

sented to the Section of Obstetrics and Diseases of Women, at the Forty-ninth Annual Meeting of the American Medical Association, held at Denver, Colo., June 7-10.

BY DENSLOW LEWIS, M.D.

CHICAGO, ILL.

Sanger tells us that gynecology is the surgery of e female genitalia. His definition is neither exact r complete, but it is clinically useful. As a matter fact the first thing to be determined in every gyne-logic case is the advisability of operation. A nec-ary subdivision of the question is at once apparent. here is the consideration of immediate operation at e time of examination, the operation in such cases ing trivial. There is to be considered the advisa-lity of local and systemic treatment, which is often a great extent tentative, with the reasonable hope that surgical treatment may ultimately be dispensed with or may become relatively insignificant, at least not especially dangerous, and finally, there is the certainty that operative measures are imperative, perhaps that their immediate adoption is the only known means of relief or of saving life, in which event removal of the patient to a hospital is usually indicated. There is, therefore, in the first examination of every gynecologic patient a chance for much difference of opinion, both as regards the indications for operation, the kind and extent of surgical measures to be adopted, as well as the relative value of measures, chiefly medicinal and topical in character, which include no extensive surgical interference.

I desire in this connection to refer to the gynecologic cases I have seen at the Chicago Policlinic during the past four years. I ask your attention exclusively to those cases, very properly designated as ambulatory, where the women, although often seriously diseased or suffering from a condition which seems to demand surgical treatment, are unable to submit to radical measures which would necessitate sojourn in a hospital or cause them to give up their daily work. These patients are chiefly working women, many of them having to support children and at times a husband. If not employed in some shop or factory they are obliged to attend to household duties, from which they can not absent themselves without serious interference with the routine of their family life. In some instances they are impostors. I have known them to come several thousand miles for treatment. They have settled down in Chicago with their families and have taken advantage of our dispensary and hospital facilities in the most shamefaced manner. Prostitutes are not frequent attendants of our gynecologic dispensary. The women, as I have said, are, as a rule, obliged to work for a living. They are often poor, but not destitute. They are, most of them, trying to do their part in the struggle of life. For this reason it is a hardship in several ways for them to remain in the hospital long enough to convalesce from an operation. They can not indulge in the "rest cure," or in many instances, purchase proper food. They seek relief from their ailments without interference with the routine of their daily life. It is gratifying for me to be able to say that often such a course of treatment is practicable and sometimes surprisingly successful. Let me briefly detail the methods in use in the different classes of cases I have been called upon to treat:

Venereal warts if small are snipped off with scissors under cocain anesthesia. Occasionally the base is touched with a drop of carbolic acid. If the warts are large and extensive the patient goes to the hospital for a few days, the strip of mucous membrane from which they grow is dissected off and the edges united, very much as in a Whitehead operation for hemorrhoids. During pregnancy no operation has been undertaken, nor have the warts, as far as known, in any way interfered with parturition. During the puerperium they diminished in size and in some cases they have disappeared. Chancroids are touched with strong carbolic acid for its anesthetic effect, followed by a drop of fuming nitric acid applied with a glass rod. Powdered boracic acid is applied to suppurating surfaces after the parts have been cleansed with a boracic acid solution and dried with absorbent cotton. No case of phagadena occurred. Chancres were not often seen. They occurred on the fourchette and inner surface of the labia majora. They were dusted

with boracic acid and pills of proto-iodid of mercury were exhibited.

Condylomata have been dusted with powdered boracic acid or stearate or oleate of zinc. A douche, often of a 1-4000 solution of bichlorid of mercury, would be given two or three times a day and general cleanliness of the parts would be insisted upon. With these local measures, under a vigorous mixed treatment, the condylomata would disappear or perceptibly diminish in size, and the ulcerative condition of the neighboring parts would improve.

Pruritus, in connection with pathologic conditions would often be relieved by applications of powdered boracic acid and the maintenance of cleanliness. In other cases a saturated solution of sulphite of sodium would be prescribed with great benefit, although in some cases of pregnancy its use would have to be persisted in.

Lacerations of the perineum would often present themselves, but usually cicatrization had taken place and no serious discomfort was occasioned by their presence. In recent cases powdered boracic acid would insure healing without much pus. Where extensive rectocele existed the patient was advised to submit to a Hegar operation in the hospital. In many instances circumstances prevented the acceptance of this advice, and it was found in the great majority of cases, that when the patient, in the course of time, recovered from pelvic pain and other symptoms due to infection of some of the pelvic viscera, the rectocele apparently caused but little inconvenience as long as the bowels acted daily. Cases of somewhat extensive laceration of the anterior vaginal wall would favor the development of a cystocele, but in many cases without appreciable inconvenience. Here also, it was noted that when the symptoms due to infection were relieved the cystocele would persist, but it would cause—at least while the patient was under observation—no decided bladder symptoms.

Many cases were observed of what is commonly called "irritation of the neck of the bladder." The symptoms were undue frequency in urination and a desire to pass a drop more accompanied by more or less pain. Urethral caruncle when observed in connection with these symptoms was promptly removed under cocain anesthesia. In addition to the routine treatment of infection of the pelvic contents, to be later described, it was customary to recommend the copious drinking of water and the exhibition of twenty grains of benzoate of sodium three or four times a day. Only exceptionally would it be necessary to give an anodyne. When pain was severe it would usually be relieved by a suppository of one-half grain of the aqueous extract of opium often combined with one-third grain of the alcoholic extract of belladonna. Once or twice a year there would be a case of chronic urethritis which would disappear under the foregoing treatment and the bi-weekly passage of steel male sounds, gradually increasing in size, as is practiced in the treatment of urethral stricture in the male. Rarely was it necessary to send the patient to the hospital for bladder irrigation, ureteral exploration or some operative procedure.

Infection of the vulvo-vaginal glands, one or both, was often observed. In many instances no special discomfort was occasioned, and in the course of time the infection would subside. In other instances pus had formed so that a free incision was necessary. Several cases were seen that had persisted for years. It was noted that a small incision, amounting to little more than a puncture, had been repeatedly made, which would allow the evacuation of pus, but the abscess would invariably recur. In such cases it was gratifying to observe that an incision which extended throughout the length of the gland would invariably effect a cure within a few days. Some chronic cases where induration was apparent were sent to the hospital and operated on by excision of the glands.

Hemorrhoids were often seen in connection with other diseased conditions. If external, and especially if situated some distance from the verge of the anus they were incised and the clot turned out. In other cases an ointment of equal parts of ung. gallæ and ung. zinci benzoat, containing perhaps ten grains of extract of opium to the ounce would reduce the tumors in size and relieve the itching and irritability complained of. Of course means were adopted to secure free bowel movements in each case.

Internal hemorrhoids and anal fissure were treated by moderately stretching the sphincter muscle and applying powdered boracic acid twice a week. Of course here also free catharsis was secured. It was found that these measures were usually sufficient to heal the fissure, reduce the hemorrhoids to an appreciable extent, and to relieve all symptoms due to their presence.

Leucorrhea, as would be expected, was a symptom frequently observed. Indeed, its presence often induced the patient to apply for treatment. She would suffer also from variable pelvic pain, but in many cases the constant discharge was so disagreeable, or its continuance was regarded as such a drain on the system that immediate and permanent relief was urgently demanded. When the discharge was at all profuse or the attack was recent, the gonococcus would be looked for. A drop or two of the pus would be collected on a glass slide; methyl blue or gentian violet used as a staining material and the specimen examined microscopically. If diplococci were found Gram's iodo-iodin solution would serve to differentiate the gonococcus by decolorizing it. Usually it was found where the discharge was profuse, unless a recent infection of the endometrium or a cervical laceration was clearly demonstrable. Vaginitis was rare except in children. This was the rule in nearly all cases of leucorrhea, the delicate character of the mucous membrane apparently offsetting the protection afforded in adults by the pavement epithelium. The treatment of gonorrhea and of the vaginitis of children consisted in the application of a nitrate of silver solution to the mucous membrane of the vulva, the entire surface of the vagina, the portio vaginalis and the exposed portion of the interior of the cervix. In adults this application consisted of a 20 grain to the ounce solution and was made with a swab of absorbent cotton at intervals of three days. A 1-4000 bichlorid douche used twice a day would also be prescribed. In children the application was necessarily less thorough. It was made in the same manner to the vulva and lower portion of the vagina, but in addition a vaginal injection of the solution, 10 grains to the ounce, would be made by means of an eye syringe.

In most of the cases that presented themselves for treatment there was evidence of infection of a cervical laceration, the endometrium, the lymphatics or veins near the uterus, the interior of the tubes, the ovaries or the peritoneum adjacent to the fimbriated extremities. These cases constituted the conditions often

called "cellulitis," "perimetritis" or "parametritis." By me these terms are no longer used. They present to my mind no definite idea of the exact pathologic condition that exists nor are they in any way indicative of etiologic relationship nor suggestive of suitable means of treatment. I also abstain from the use of the words "endometritis," "salpingitis" and "ovaritis." These expressions, it must be admitted, indicate very often the true condition that exists but, with our latter day knowledge of bacteriology, we understand that the inflammatory reaction that occurs when infection takes place, is the effect of microbic action and is always the result of a morbid process, which is itself usually of the first importance.

I have no wish to be pedantic, at the same time I contend that for many reasons, it is preferable to say infection of the endometrium or tube, as the case may be. This defines the exact condition. This is a step in the right direction. It will not be long before the variety of infection will be stated, with very great value to our knowledge of definite therapeusis. The effects of the inflammatory reaction must also be recognized and appreciated. Indeed, in many of these cases, the extent of the inflammation is of itself a positive indication for determining the proper course of treatment.

Lacerations of the cervix were often noted. Sometimes there would be no infection. The finger could detect a solution of continuity in the portio vaginalis but no other symptoms, subjective or objective, could be determined. In such cases the lacerations were let alone. In other cases the infection was the factor of importance. The portio vaginalis, torn bilaterally or presenting an irregularly stellate laceration, would be everted or hypertrophied, the red and inflamed surface of the endocervical mucous membrane constituting the condition which used to be called "ulceration of the womb." In all such cases there was found an extension of the infection to the endometrial mucous membrane or beyond. Repair of the lacerations or amputation of the cervix, together with a thorough curetting, was usually recommended, but in most instances, sociologic and economic reasons prevented the acceptance of this advice. Under these conditions, powdered boracic acid was applied and the routine treatment, soon to be described, was persisted in, usually with satisfactory result.

I may as well state frankly that our diagnosis was often imperfect and incomplete in many of the cases where infection, originating in the endometrium, had extended either by continuity of epithelial surface through the tube to the ovary or to the peritoneum or where invasion occurred through veins or lymphatics—often of the placental site—to the parenchyma of the uterus or the surrounding areolar tissue. It must be remembered that we encountered stout patients and those in whom there was much muscular rigidity or extreme tenderness. The bimanual examination was often facilitated by the assumption of the exaggerated lithotomy position and the use of a vulcella forceps, but these means were not always sufficient to enable us to map out the pelvic contents with any degree of accuracy, and it was rarely practicable for our patients to take an anesthetic.

Under these conditions the presence of infection could be noted but the locations infected could not be accurately determined until the patient had become accustomed to our examination or the tenderness had appreciably subsided. As a matter of fact, as I often took occasion to say to the practitioners who attend our clinic, the etiologic relationship and the location of the infection are relatively of little consequence in comparison with the importance of knowing its extent; that is, if it has gone on to suppuration. The presence of pus in the pelvis is, in my judgment, the important point to be determined in the examination of gynecologic cases showing the effects of infection. When pus has formed to any great extent its evacuation is usually the proper treatment. In our patients, however, it was often impossible to operate and our advice had to be disregarded. It is extremely gratifying to be able to say that in the great majority of cases where pus was diagnosed in the tube or the areolar tissue of the broad ligament our treatment would succeed in relieving all pain and all discomfort so that the patient became symptomatically well. This experience in time modified our prognosis and had its effect upon our advice. When a pyosalpinx was discovered we did not feel it necessary to demand an immediate celiotomy as the only means of saving life. When pus was diagnosed in connection with the ovary or broad ligament we insisted that the surest and speediest way to ensure recovery was a vaginal incision and drainage, as Henrotin has so ably pointed out. Nevertheless, we soon learned that if circumstances prevented a sojourn in the hospital and operative interference, there was a reasonable probability that in the course of time microbic action would cease, the pus, now no longer septic, would become absorbed or encapsulated, and the patient would be free from pain and discomfort. We learned further that our routine treatment was beneficial in all cases of infection of the pelvic organs or the tissues surrounding them. As a matter of practice, we submitted all patients of this class to essentially the same treatment. We succeeded in all cases except those requiring surgical interference, and in many of these cases, when we advised vaginal or abdominal incision for the evacuation of pus, curetting for the removal of granulations or the retention of membranes following abortion or labor, trachelorrhaphy or some form of colporrhaphy, it was most surprising to notice that the symptoms would gradually subside and the patients would be able to continue their daily occupations without inconvenience.

I will now state the details of what I have called our routine treatment. I do not claim that it is the best treatment, much less that it is the only treatment for this class of cases. In our hands it has been found convenient and many hundreds of poor women can testify as to its success. I consider it worthy of mention, although there is nothing new about it, for it must be remembered that the patients who were benefited were working women unable to purchase expensive drugs, food or appliances and forced to continue on in their daily routine of life. Our first direction is a 1-4000 bichlorid of mercury douche to be taken as hot as can be borne twice daily, with the patient on her back and the hips up. The error is explained of an attempt to take such a douche with the bulb syringe or on the water closet seat. The patient lies flat on her back in the bath tub with a rubber water bag under her hips, or, as often happens, if there is no bath tub, she lies on the edge of the bed with her feet separated, each on a chair.

The bowels are made to act freely at least once a day. For this purpose it is customary to prescribe the fluid extract of cascara sagrada in a routine man-

ner. The drug is given at first in 20 drop doses to be taken three times a day. If the bowels do not move, a compound cathartic pill is given at night and a dose of salts in the morning. Sometimes it is necessary to give at first a saline enema or one of glycerine and water. However this may be, no more than 20 drops of the cascara are given at a dose. In a few days the salts may usually be omitted in the morning and some days later the pill at night is also omitted, to be promptly resumed, however, if on any day the bowels fail to move. It is usually found that, after a week's time, the three daily doses of cascara produce daily evacuations. Our directions now are that the drug be taken regularly in the same dose no matter how frequent the discharges may be, provided they are fecal in character. It is noted that after the cascara has been taken for some little time, colicky pain and diarrheal movements supervene. This is our signal, not for stopping the medicine, but for its exhibition in the same way three times a day in a smaller dose, say 15 drops instead of 20. Another period of regular bowel movement usually follows but, in the course of time there again occur watery movements and abdominal colic. Here again the dose is diminished, the original dose being promptly resumed or the cathartic pill, enema or salts given if required. In a few weeks more the dose can often be still further reduced although taken in the same regular manner, three times a day. Finally, after the dose has been reduced to one drop three times a day, the medicine can be discontinued and the bowels act freely and regularly of their own accord.

The patient is told to assume the knee-chest position twice a day for ten minutes. Twice a week, when she calls at the dispensary, she assumes this position upon the operating table, a large Sims's speculum is introduced and a tampon of absorbent wool, one end soaked in a 10 per cent. solution of ichthyol in glycerine is applied by means of a uterine dressing forceps. This tampon remains in situ some twenty-four hours, unless an offensive discharge or undue irritation ensue, and is removed by the patient by means of a string which is tied to one end of the tampon.

This is our routine treatment of infection of the pelvic contents. Powdered boracic acid is dusted on the inflamed cervix. Benzoate of sodium is given as already stated when there is irritation of the bladder. Quinia, iron and strychnia are often given with phosphoric acid. Some form of pepsin with hydrochloric acid is prescribed when there is stomachic indigestion. These drugs are invariably combined with cascara even when the patient disclaims any tendency to constipation. Very rarely is it necessary to prescribe anything else. No uterine probe or sound is used in my clinic nor is there ever made a uterine application. Our experience with pessaries has consisted solely in their removal. No uterine dilatation is practiced. I hardly need say much in explanation of this plan of treatment. My purpose is to record facts and not to attempt to defend a theory. Uterine dilatation is rarely, in my opinion, a justifiable procedure in an ambulatory patient. In the class of cases under consideration it would have been a dangerous experiment. For the same reason no application was made to the endometrium. My experience with hundreds of women during the past four years appears to show that it is unnecessary.

Some surprise may be occasioned by the absence of all reference to uterine displacements. It does not mean that they were not observed. They were usually found, however, in connection with pathologic conditions which were themselves of chief importance. In the absence of fibromata of the uterus or cysts of the ovary or broad ligament, in the absence of ectopic gestation, hematoma or other condition which mechanically influenced the position of the uterus, displacement occurred as the sequel of infection or the inflammatory action that had ensued. With an infected puerperal uterus, with adhesions which matted the parts together, it was evident that the infection was of the first importance, and it was usually found that when the infection was benefited by treatment, the uterine displacement disappeared or caused no inconvenience unless there were present conditions warranting operation. For this reason the displacement of the infected uterus was practically disregarded. The mobility of the healthy uterus was explained to our practitioner-students by reference to well-known facts concerning the anatomy of the parts and by demonstration in patients free from infection. The presence of infection was pointed out both in reference to its etiologic relationship to the displacement and its importance as an object of attack in our treatment. The symptoms complained of were very much alike wherever there was infection which had extended much. There was pelvic pain and a "bearing down" sensation, usually increased during menstruation. There were often bladder symptoms, due to pressure, or to an amount of infection which showed itself by no objective symptoms. There was lumbo-sacral, as well as inguinal pain, and there was often pain extending down the inner surfaces of the legs. There were reflex symptoms in great number and in varied character. It was our constant endeavor to secure an accurate record of all these symptoms. Our history also included a full description of all objective symptoms which were described as the "result of physical examination." For instance, under this head, the record would show "solid, movable tumor, oval in shape, apparently two inches in length, in cul-de-sac," also, in the same case, "no tube or ovary palpated in left ovarian region," and under the head of diagnosis we would insert "prolapse of inflamed, left ovary." These facts are mentioned, for it is evident that the diagnosis, which is the deduction from the premises presented, may often be inaccurate, whereas the record of symptoms complained of and of physical findings is apt to be reasonably correct, provided the observer exercises proper care in the interrogation of the patient and is experienced in his examination.

In cases presenting the usual symptoms of infection, together with leucorrhea, uterine tenderness and sometimes enlargement as well, our diagnosis of the infection referred especially to the endometrium. Where infection of a cervical laceration was evident it was assumed that extension by epithelial continuity had taken place unless it was at the same time apparent that some traumatism was present or that retention of membranes or placental remnants had occurred. Curetting was advised in these cases when menorrhagia or metrorrhagia persisted, when offensive leucorrhea occurred as a sequel of labor or abortion, or when the chronic character of the infection and the continuance of the leucorrhea gave reason to believe that granulations had resulted. Curetting was not advised in cases which showed an extension of the infection beyond the endometrium. When pus was

present anywhere in the pelvis its evacuation was considered rational and it was found that subsequently our routine treatment in time controlled the infection of the endometrium. When congestion and other evidence of phagocytosis were noticed beyond the endometrium it was deemed judicious to persist in local treatment until the effects of infection were removed or until the formation of pus had become a certainty. Especially in extension to the mucous membrane of the tube was it considered advisable to defer a curetting because the probability of a reinfection of the endometrium was a danger which our experience taught us to be imminent. Indeed, in several cases where both tubes had been removed it was observed that the infection of the endometrium still continued and gave rise to symptoms scarcely less severe than those which were noted prior to the operation.

Many of the cases where operative interference was advised and where circumstances prevented the acceptance of our advice were after all forced to submit to hospital treatment owing to subsequent pus formation or the development of other serious sequelæ. Nevertheless it must be stated that in a certain number of cases when, in our judgment, an operation was urgently demanded, the symptoms, under our routine treatment, would gradually improve and finally disappear.

When a fluctuating tumor was felt outside of the uterus, the anamnesis and the concomitant symptoms would permit us to determine the presence of pus. Its immediate evacuation was recommended in all extraperitoneal cases. The etiologic differentiation was often difficult and at times impossible. We felt, however, that the important point to be determined was the relationship of the pus to the peritoneum. Whether the suppuration was the sequel of invasion through lymphatics or veins of vulva, vagina, cervix or uterus or had occurred by an extension through the tube to the ovary or the pelvic peritoneum was, in our judgment, of insignificant importance in comparison with the necessity of determining the feasibility of operating without danger to the peritoneum. In many cases where pus was diagnosed and in certain cases where its presence was demonstrated, it was observed that the swelling would subside, the pain would diminish, menstruation would become normal in character and the patient in time would be relieved of all symptoms.

Where pyosalpinx was diagnosed, an immediate operation was not usually advised. Our experience showed that quite often pus, in the course of time, would be evacuated through the uterus and all symptoms of infection would disappear. Many chronic indeterminate cases were observed. The excursion of the uterus would be restricted by adhesions. The infection would have persisted for years with irregular exacerbations. Pain, tenderness, leucorrhea and menstrual derangement would be associated with various effects of infection. In these cases especially our routine treatment would yield most satisfactory results. In all cases the subjective symptoms would in time disappear or suppuration would become localized so that proper surgical measures could be employed.

The record of these everyday gynecologic cases and the details of the simple treatment instituted, will be considered of but little value by gentlemen who see in every woman only a patient to be operated on. I venture to hope, however, that it is not without interest for us to realize the possibility of relieving distressing symptoms, even in serious cases, when circumstances prevent hospital treatment. I consider it of importance for us to understand that patients can sometimes recover without curetting, uterine dilatation or the application of caustics to the endometrium. I think it well for us to know that lacerations of perineum, vagina and cervix do not always have to be closed. I regard it as a matter of interest to appreciate the fact that the day of the pessary has passed and that displacements are no longer of paramount importance. It is, moreover, satisfactory to note that even in cases where the consensus of opinion would pronounce unhesitatingly in favor of operation, it is occasionally possible for milder measures to succeed in the amelioration of symptoms, while the patient continues to follow her usual pursuits. The inference from this observation is obvious. Infection is the factor of importance in most gynecologic cases. Displacement, hypertrophy and hyperplasia are essentially the result of infection or the sequel of the consecutive inflammation. Infection is chiefly to be considered in the adaptation of our therapeusis. Indeed in many cases no thought need be given to concomitant conditions. Caustics, astringents, scarifications and many ancient practices which prevailed when we sought to control inflammation are superseded by rational methods based upon an increasing knowledge of bacteriology.

CONGENITAL UTERINE ATRESIA AND DOUBLE HEMATOSALPINX.

Presented to the Section on Obstetrics and Diseases of Women at the Forty-ninth Annual Meeting of the American Medical Association, held at Denver, Colo., June 7-10, 1898.

BY ALEX. HUGH FERGUSON, M.D.

CHICAGO, ILL.

Congenital uterine atresia with consequent double hematosalpinx is sufficiently rare and interesting to crave your attention to a report of the only case suffering from these conditions met with in my practice. This was a case of atresia of the cervix uteri without the least communication between the uterine cavity and vagina. The vagina was nearly normal in size. There was a free communication between the uterine cavity and the enormously distended Fallopian tubes and adventitious cysts in the pelvis. The accumulation of six years of the menstrual fluid was imprisoned in the uterus, tubes and acquired cysts, except the amount that had become absorbed. An operation effected relief.

The history of the case is as follows: Mrs. B., patient of Dr. Dame of Winnipeg, was admitted to the St. Boniface Hospital, complaining of abdominal enlargement and frequent attacks of pain in the lower half of the abdomen. She was a brunette, 24 years of age, of plump and healthy appearance, weighing 136 pounds, and sanguine in temperament. In the history of her development during girlhood days there was nothing unusual. When 18 years old, having then to all appearances grown to be a woman, monthly pains in her breasts, back and pelvis began; and several months, with three or four days of suffering in each, passed by without a menstrual flow appearing. When about 20 years of age a physician was consulted, and then she was given internal medication, but no physical examination of the generative

organs was made. Two years were consumed in general treatment and still no flow appeared. During these four years (18 to 22) her general health was good. She was constipated. She enjoyed life as other girls did, except at monthly periods, when pains and local pelvic distress were severer each succeeding

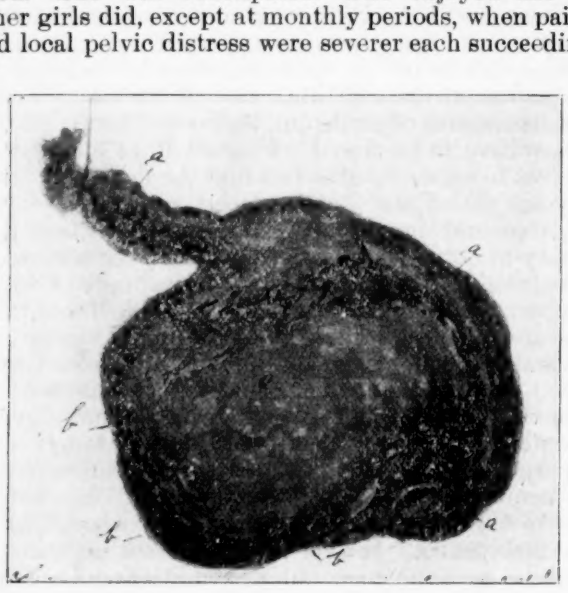


Fig. 1.—Left hematosalpinx, four-ninths actual size. a, fallopian tube; b, ovarian tissue thinned out and forming part of cyst wall; c, cyst.

month than during the previous one. Latterly, however, attacks of cramping pains intervened between the periodical monthly disturbances, and the abdomen became enlarged, perceptible only to herself at first. A few more months of suffering elapsed, the attacks becoming more frequent and the abdominal

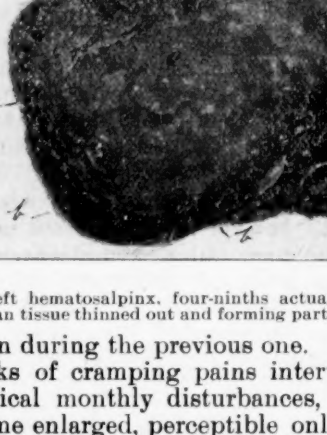


Fig. 2.—Right hematosalpinx, four-ninths actual size. a, fallopian tube; b, ovary; c, cysts.

enlargement well pronounced. She then consulted the late Professor Fenwick of Kingston, Canada, who diagnosed her case and opened the abdomen, in 1893, with the idea of removing the tumors. He found the pelvis filled with two cysts, and so extensively attached with vascular adhesions to omentum and bowels that he thought it best to leave them alone. He closed the abdomen and left the blue and vascular-looking cysts in the pelvis. She made a speedy recovery from the operation. Her sufferings continued, and the tumors increased in size. Still her general health was fair, and she was able to do her share of home household duties. A few months afterward she married and moved to Manitoba, where she fell into the hands of Dr. Dame, who referred her to me for operation. A physical examination revealed a prominent abdomen immediately above the pelvis; a tender mass extending on left side to a point midway between the pubes and the umbilicus, and another on the right, not so high, but equally tender. The vulva, vagina and cervix appeared normal to sight and touch. A uterine probe passed into os uteri about one-eighth of an inch and there became obstructed. The occlusion was inspected through a straight cervical speculum. There was nothing to be seen but smooth mucous membrane. The atresia was undoubted. The uterus was slightly movable and two tender masses could be felt, one on each side of it, and extending backward and downward, filling the pouch of Douglas. Bimanually it felt more like a double pyosalpinx than anything else. She had a temperature in her last attack of local peritonitis, and it was feared that the retained menstrual fluid had become infected. The rectum was free from trouble. Coitus was always a little painful to her at first, but she was quite amorous and enjoyed the orgasm.

Operation.—On June 16, 1894, assisted by Drs. Dame and Todd, I successfully removed the double hematosalpinx. The abdominal scar tissue was extirpated, the abdomen opened, the adhesions rapidly stripped off, commencing behind the left horn of the uterus, where a free cleavage point was found. No difficulty was experienced in turning out the left dilated tube and ovary without rupture of the tube or cyst. I then amputated the left Fallopian tube down to the uterine mucosa. The uterine cavity was filled with a dark-looking, tenacious fluid and freely communicated with the Fallopian tube, which was distended with the same material. An interlocking ligature of silk was applied to the pedicle and the mass cut off. The hemorrhage, although copious, was not alarming and was easily controlled. A probe was then passed into the uterus and extended into the cervix beyond the internal os. The cavity of the uterus was not much enlarged. I decided not to remove the uterus, but to open and drain it per vaginam. The dark, treacly substance was squeezed out, and the hole at the cornu closed with catgut sutures. The right dilated tube and ovary were dealt with in a similar manner, and the abdominal operation completed without delay. On account of the extent of the raw surface left, both gauze and tube drainage were inserted. The cervix was exposed through the vagina and split transversely a distance of about half an inch, when the uterine cavity was reached. It was washed out and drained with gauze. The patient made an uninterrupted recovery and left the hospital on the twenty-third day after the operation. Three weeks afterward the silk ligature (the only silk used) on the left stump misbehaved and came away via abdominal incision, after which she remained well. A year later the cervical canal was quite patulous and she was enjoying excellent health.

THE SPECIMENS.

Fig. 1 represents the left hematosalpinx two-thirds

its actual size. It is, more properly speaking, a tubo-ovarian retention cyst, inasmuch as the ovary forms part of the cyst wall, and the contents consist of the retained menstrual fluid. Fig. 2 represents the right distended tube and ovary, two-thirds its actual size. The ovary is distinct by itself and in a condition of cystic degeneration. The Fallopian tube and adventitious cysts at its end contain menstrual fluid. The plates are accurate, the drawings being made before the cysts were opened, so I shall not describe the external appearance of the two specimens.

The pathologic anatomy and nature of the retained menses are well known. In this connection let me say that two fimbriæ of the left tube could be differentiated within the cyst, and the contents were free from germs.

THE USE OF THE CURETTE IN ACUTE INFECTION OF UTERUS WITH ADHERENT PLACENTA.

Presented to the Section on Obstetrics and Diseases of Women at the Forty-ninth Annual Meeting of the American Medical Association, held at Denver, Colo., July 7–10, 1898.

BY D. S. FAIRCHILD, M.D.

CLINTON, IOWA.

In the midst of the discussions of the more difficult and complex questions of abdominal and pelvic surgery our leading and most eminent gynecologists, whose opinions are of inestimable value to workers in more limited fields of general gynecologic work, often fail to furnish us lessons from the results of their own varied experience in the less brilliant but equally important matters pertaining to every-day practice.

I have often been impressed with the thought, if our information was definite enough in relation to the use of the curette in removing attached portions of placenta in cases of abortion, premature labor or labor at full term when infection has occured. It is clear enough that in diseases of the endometrium the curette is of great value and is, as a general rule, properly used in the cases which come under our daily notice. But in the cases where, from the retention of small masses of adherent placenta, infection has occurred, the uterine mucosa is softened, the uterine lymphatics are blocked with infectious thrombi and the temperature elevated from absorption of septic material, is it really safe to employ the curette in a vigorous and indiscriminate manner? I have frequently observed in general surgical practice that in certain cases of local infection anything more than the most careful and delicate procedures has been attended by a sudden accession of the local symptoms, together with a marked rise of temperature and have observed the same condition arise after curetting a uterus containing acute infective material.

I am aware that many advocate the use of the curette in septic conditions of the uterus following abortions or after labor, when there is reason to believe that portions of placenta are still retained in the organ. I have of late years been led to believe that this is not an altogether safe practice to follow. Great discrimination should be employed in resorting to this procedure, otherwise much harm may be done.

In cases where decomposing material affected by saprophytic micro-organisms is retained in the uterus the influence of which is marked by high temperature and offensive lochia, the dull curette employed carefully for the purpose of removing from the organ the offending substance, which has but little or no attachments to the uterine walls, is an exceedingly valuable procedure, followed by irrigation with sterilized water. When, however, a septic endometritis exists in connection with necrotic decidua burdened with septic germs, streptocccci, the curette may become a very dangerous instrument. In these cases it is quite easy to inflict a trauma which may serve as an additional means of introducing septic germs into the system. The protective granulation layer which serves a conservative purpose of limiting the constitutional infection may thus be distributed, furthermore it is quite possible to penetrate the softened uterine tissue and thus lead to most disastrous results.

The use of the curette in the removal of adherent portions of placenta in the early period after an abortion, before a septic inflammation of the uterus has occurred is beneficial and this together with thorough irrigation will save some of the danger of infection. But after septic infection has once developed this treatment is attended, with considerable danger as I have abundant proof in my own hands and in the practice of professional friends. I have no recent misfortune of my own to record for I have long since abandoned this method of treatment. The removal of adherent masses under these conditions by scraping with the finger nail is not less hazardous, but even more so, on account of the trauma inflicted and on account of the risk of introducing germs which may lie concealed under the nail, especially under some nails which may be used for this purpose. The conditions which we have to contend with in these cases are purely surgical and should be treated accordingly.

If a surgeon, in the treatment of an infective wound, should undertake to remove necrotic tissue by violent means he would find that the condition of the wound and the general condition of the patient would become more serious In all cases of septic infection, whether of wounds or of the uterus, drainage is the first consideration together with the removal of infective material so far as possible without disturbing the boundaries which conservative efforts have placed for the purpose of protecting the system against infection. It often becomes a delicate question what to do in cases of sepsis arising from the uterus. The general practitioner will, in a great number of cases, be called upon to decide what course to pursue, and if he has in mind the necessity of employing the curette as the most approved method of treatment he will sometimes be led into most serious difficulty and do his patient great harm. A correct appreciation of the pathologic condition should underlie the measures to be employed. If the examination reveals the existence of necrotic decidua, bearing saprophytic micro-organisms, giving rise to sapremic intoxication, the careful use, of the dull curette, not for the purpose of scraping the interior of the uterus, but for the purpose of facilitating the escape of the contents of the organ, followed by irrigation with sterilized water, will accomplish the desired end. If, as it is sometimes found, the os is somewhat tightly closed, under the influence of an anesthetic the cervix can easily be placed in the most favorable position and sufficiently dilated for satisfactory drainage. If it is found however that the uterus is swollen and the endometrium softened and infected with streptococcus, only the irrigation should be employed, and the irrigator handled with great care lest the violence disturb the granulation layer and expose new points for the ab-

sorption of infection and thus expose the system to a larger dose of poison. If the examination reveals the absence of an offensive discharge, and the general symptoms are profound and not attended with local conditions other than a septic and necrotic endometrium, no local treatment should be instituted, for it is probable that the uterus is infected throughout, that a condition of thrombo phlebitis exists, that the uterus is softened, that no granulation layer exists, and the use of the curette or irrigation can do no good, but rather harm, and should be avoided. Whatever may be the merits of a vaginal hysterectomy in these cases can not be considered in this paper for the reason that the great multitude of physicians who have these patients to treat can not afford to employ it in general. It will occasionally happen that the os is closed in cases in which it will be necessary to reach the interior of the organ. I do not remember of meeting with a case where I could not dilate the cervix with my finger when the patient was under the influence of an anesthetic, but if the cervix is too rigid to be dilated in this manner forcible instrumental means may be employed, but great care should be observed lest a trauma be inflicted and at least afford additional facilities for the absorbtion of septic material.

This paper is presented simply as a protest against what I believe to be a indiscriminate use of the curette in acute infection of the uterus. While these observations may not have any application to leading members of the profession I am quite sure that the lines bounding the use of this instrument are not often enough drawn to furnish safe guides for many practitioners whose experience is more limited.

I contend that great care should be observed in the use of the curette in acute infection of the uterus.

In cases in which portions of placenta are adherent they should be removed by the sharp curette, but before infection has occurred, under antiseptic precautions. If infection has developed, it is safer to remove all detached portions with a dull curette without inflicting trauma, irrigate and drain. If infection of the uterus has occurred without offensive lochia but with serious constitutional symptoms, no curettement or irrigation should be employed. The dangers of the free use of the curette are of two kinds: 1, inflicting trauma which may facilitate absorption of infection material; 2, the penetration of the softened uterine tissue. If the os has closed, retaining in the uterus suspicious or decomposing material, very careful dilatation should be employed under an anesthetic; detached masses removed with the dull curette and gentle irrigation employed; the whole procedure so conducted as to inflict the least trauma possible.

THE EFFECT OF UTERINE CURETTAGE AND DRAINAGE ON DISEASE OF THE TUBES.

Presented to the Section on Obstetrics and Diseases of Women at the Forty-ninth Annual Meeting of the American Medical Association, held at Denver, Colo., June 7-10, 1897.

BY W. W. GRANT, M.D.

DENVER, COLO.

One of the commonest diseases of womanhood, and at the same time one of the most serious in its consequences to health and life, is inflammation of the Fallopian tubes. It is very generally, if not uniformly, secondary to disease elsewhere. Like peritonitis, it is not idiopathic. It is a common cause of sterility, either in direct consequence of the disease, or as a result of the surgical measures employed for its cure. It leads not infrequently to fatal results. Therefore to prevent mortality and to preserve mental stability and the functions of maternity, disease of these appendages is second in importance to no other, and appeals always to our highest consideration and best judgment.

It is just to say that pyosalpinx is a purely surgical condition, requiring some form of operative procedure for its permanent cure, yet cases now and then recover without recourse to the knife. As uterine endometritis is the usual cause of salpingitis, it is self-evident that whatever means will prevent, or most speedily cure, the former disease can only tend to the preservation of the functions and integrity of the tubes. Acute aseptic corporeal endometritis is not often observed. As sepsis following abortion, labor, gonorrhea or operations, is the usual cause of serious forms of uterine endometritis, and secondarily of salpingitis, it follows that prompt and efficient treatment of the endometritis is a primary necessity of the greatest importance. In gonorrheal endometritis the virulence of the gonococci is not, at this stage, so great, being rarely acute even at a comparatively early period, and is not therefore manifested by the severe positive symptoms of the acute vulvo-vaginal, uretheral and cervical forms of the disease, consequently it is generally overlooked. To Sanger is credited the statement that about one-eighth of all gynecologic diseases are credited to gonorrhea. Unlike puerperal sepsis there are no immediate constitutional or peritoneal indications, these being dependent upon septic absorption as well as extension of the disease in one case, and chiefly extension of the inflammation to the tubes in the gonorrheal form, and usually by leakage from the abdominal ostium of the tube inducing severe violent or local peritonitis. In every form of septic endometritis except the early gonorrheal, the wise and accepted rule of treatment is to clean out all débris and foci of infection from the uterus by curettage, irrigation, or both, ordinarily supplemented by gauze drainage. The rule is the reverse, in fact the treatment is negative, as to the early period of gonorrheal endometritis, on the ground that to curette the uterus at this time and in this condition is to open up new channels of infection and cause a more certain extension of disease to the tubes and peritoneum. I very much doubt the wisdom of the usual inaction and delay at so important a juncture. The reasoning I believe more theoretic than practical. The uterus is not in the soft receptive state of the puerperium, and yet we know that the mortality in the latter has been greatly diminished and should practically be abolished by early curettage, irrigation and gauze drainage. Deep and thorough curettage is specially necessary in the gonorrheal cases, because the utricular glands are deeply affected. After curretting apply immediately such a mixture as iodin and carbolic acid, and then antiseptic gauze for drainage and there need be liitle fear of aggravating the disease. The surgical principle involved is the same in all—to remove the diseased tissue, which is the source of infection, and place the parts in the best possible contion for drainage and thus prevent further infection. This is the dictum of modern surgery and I believe should be applied in the early period of uterine gonorrheal, as well as puerperal or other infection. It

is usually during the period of declension, which in the adult is not usually vaginal, that the endometrium becomes affected and there should be no great risk in curetting at such a time.

Not a great while ago I treated a case of gonorrheal puerperal sepsis in which the wife in the last four or five weeks of pregnancy contracted gonorrhea from her husband, she never knowing the nature of her disease. By all possible cleanliness and the use of sublimate irrigations to the very hour of labor I hoped to prevent puerperal sepsis. But distinct chills and temperature of 103 degrees on the third day, alternating with perspiration and attended with pain in left ovarian region, left no doubt as to the nature of the trouble. There was distinct swelling of the left tube, with a well-defined circumscribed tumor at the site of the ovary; no parts of membrane or placental tissue were found in the uterus, which was immediately irrigated and drained with iodoform gauze. This was repeated several times in the course of a week, with resulting lower temperature. After a vacillating and uncertain history for two or three weeks the patient gradually improved, with a steady decrease of the tumor and temperature, which in seven weeks disappeared without operation or rupture of abscess—I supposing abscess would result. Her recovery was finally complete and she again became pregnant. The right tube was not involved. I have no doubt the sepsis was gonorrheal in origin and by extension to the tubes produced severe local peritonitis.

On Nov. 29, 1896, I was called to see Miss L., aged 20, who the night previous had slight chills with pain in the hypogastrium. About a month before she contracted gonorrhea, which had produced endometritis, suppurative salpingitis and local peritonitis, doubtless from leakage of the tube. The left tube was swollen and tender, with a distinct circumscribed swelling as large as an unhulled walnut in the left broad ligament, with a temperature of 103 degrees and a free mucopurulent discharge from the uterus. Suspecting there might be remnants of an abortion, the patient was anesthetized the second day, the uterus dilated and no evidence of abortion found. It was now thoroughly curetted under sublimate irrigation of 1 to 4000 and gently packed with 5 per cent. iodoform gauze for drainage which was removed at the end of the third day. The temperature immediately fell to 101. The operation was not repeated. For three weeks the temperature varied from 99 to 100 in the morning, to 101, and occasionally to 102, in the evening. At no time was there much tympanitis or evidence of extensive peritonitis. After this there was steady improvement, the swelling or tumor gradually disappearing and a diminishing pus discharge from the uterus, with occasional—temporary—interruptions. She was in bed eight weeks, when the tumor had completely disappeared. Slight uterine discharge continued two or three weeks longer. After curetting, the treatment was rigid confinement to bed with hot antiseptic vaginal irrigation and cotton batting and bandage to abdomen; mercury and iodid potash internally and salines, with rarely an anodyne.

This was an undoubted case of gonorrheal purulent salpingitis with severe local peritonitis, due probably to leakage, and in which there was not the usual closure in such cases of either the abdominal or uterine ostium of the tube. I have examined this patient several times in the past year, the last recently, and she is, under bimanual palpation, as well as symptomatically, entirely well. Menstruation is perfectly regular and painless, though not quite so profuse as formerly. In such cases operation by section or even per vaginam is not advisable in the acute stage because of the greater virulence of infection and danger, unless demanded by impending general peritonitis. In each of these cases I believed that a subsequent operation by incision and drainage or extirpation would be necessary, in accordance with our more common experience. Pus tubes and small accumulations by leakage are soon encysted by inflammatory adhesions and in the absence of extending peritonitis, general infection or other grave symptoms, the indications for immediate operation are not urgent, and it may safely be deferred a few weeks.

A sister of the last patient suffered from gonorrhea about the same time, but with no acute symptoms referable to uterus or tubes, yet disturbed menstruation, irregular, more profuse and painful and ill health, caused her to consult me a year later. She was suffering from chronic endometritis and right catarrhal salpingitis, for which in January, 1898, I curetted and drained the uterus. Small strips of gauze with mild iodin and carbolic acid applications were applied once a week for five or six weeks. Her health improved steadily, and is now fully restored.

Mrs. C., aged 26, in first labor July, 1896, suffered two or three days from puerperal intoxication, or sepsis, due to retained membrane, which was promptly relieved by curettage, irrigation and drainage. A few months later she experienced some pain in the right ovary and tube, which in six or eight months was greatly increased, especially at menstrual periods and when on her feet much. She was exceedingly nervous and at this time I found the uterus retroflexed and slightly adherent, the fundus thickened, as it is so commonly in retrodisplacements, with pain and tenderness and slight enlargement of right tube from interstitial inflammation; leucorrhea slight and inconstant. With patient in knee chest position, and by the use of two fingers in the vagina and moderate pressure, the uterus was immediately replaced, but followed immediately by increased pain, and a temperature of 101, which was reduced permanently to normal in twenty-four hours by absolute quiet, which was maintained for a week, the uterine tenderness to pressure and pain in the right side continuing moderately during this time. After two or three weeks, the local symptoms being in abeyance, the uterus was curetted and drained with iodoform gauze, and a pessary (Albert Smith) inserted, and the patient kept in bed two weeks. After the operation she improved rapidly in every respect, gaining ten pounds in a month, and is now perfectly well and entirely free from nervousness and pain at any time.

In line with the foregoing treatment, the following case seems to me of interest:

Mrs. W., aged 28, confined two years before, labor normal. Returned from visit to the East latter part of October, 1896; was taken early in November with mild typhoid fever. About the 20th ordinary menstruation was manifested. On the evening of the second day the flow suddenly ceased, with severe uterine colic, which continued all night. Believing the history for two or three weeks and present condition demanded a thorough and immediate investigation the patient was anesthetized, and examination revealed a rigidly anteflexed uterus, fundus slightly enlarged and a small tumor in left broad ligament. The two or three preceding menstrual periods were attended with some pain in this locality, while menstruation had always previously been painless. It was impossible to insert the blades of the dilator, so I succeeded with small conical dressing forceps in entering the uterus, when about an ounce of dark menstrual blood escaped. The internal os was rigid, the tissues hard, but yielded slowly and sufficiently to the dilator. There was no growth or débris in the uterus. It was gently curetted and irrigated and packed loosely with iodoform gauze. The pain ceased at once, and menstruation has been regular and painless to the present time. The tumor gradually disappeared without further treatment and the patient progressed and convalesced in the usual way with the fever.

This was unquestionably a case of hematometra—hematosalpinx and hematoma from gradual and finally complete obstruction at the internal os, due partly to mechanical constriction from an unusual degree of anteflexion and probable cicatricial contraction at the os internum. This is an unusual complication, subsequent to labor, and manifested under such conditions excited more than ordinary interest.

I have confined myself to the presentation of a few cases from my list that seem typic, to accentuate

certain facts and probabilities in reference to disease of the tubes, their cause and treatment. I refrain from discussion at present of the plain operable cases, It is evident that some cases of pyosalpinx will recover without operation by drainage through the uterus. That the best treatment of subacute and chronic and interstitial salpingitis is curettage and drainage of the uterus, using such other local and constitutional means as may be indicated or appropriate to the case, and that such treatment may be useful in some cases of purulent, not cystic, salpingitis, though not as a rule deemed wise and appropriate in acute salpingitis, yet I believe it true that rough examinations and manipulations and pulling the uterus down, thus stretching the inflamed organs and tissues, would do more harm than gentle curettage of the uterus and the application of iodoform gauze for drainage.

As the endometrium is the usual channel by which disease invades the tubes, we should in all cases, infectious and non-infectious, give the former prompt and earlier consideration than is frequently accorded, and this is especially true of gonorrheal cervicitis and corporeal endometritis, which not being ushered in with severe and acute manifestations, is generally overlooked; and if observed at an earlier period, as it may be, should be treated by curettage, irrigation and drainage, not only to cure the local disease, but contrary to the generally accepted opinion, to prevent the extension of the disease to the corporeal endometrium tubes and glandular tissues. The left tube is more frequently affected than the right, and when the disease is unilateral, I believe the treatment advised will very generally tend to prevent extension of the disease to the sound tube and ovary, which should be preserved always when not destroyed by disease, even should it become necessary to remove the appendages of the opposite side. Such possible contingencies is no defense for their sacrifice. It is doubtless quite well understood that drainage is not a positive necessity after curetting an aseptic uterus under aseptic conditions, but I always use the antiseptic gauze nevertheless, and have never had occasion to regret it. In two or three hundred cases of curettage, some of them septic, but most of them not, I have never seen a single unpleasant result from the use of gauze drainage. Penrose in his recent excellent work says that "gauze is liable to obstruct the escape, rather than favor drainage, of discharges from the uterine cavity," and that "elevation of temperature and uterine pain are often caused by it."

I think surgeons are quite well agreed that no better drainage material exists for use in the peritoneal cavity and appendical abscesses, and I am quite certain that most of those who have used it extensively in the cavity of the uterus, are equally favorable to its use, most certainly in septic cases. Yet if it should produce fever by not draining the aseptic uterus, its use would be inappropriate in the septic, and I am quite confident this is not the experience of most operators. I have long been convinced that antiseptic gauze is, by all odds, the best possible material at our command for draining the septic uterus, and that it not only keeps open the cervical canal, but maintains a germicide in easy and direct contact with the whole diseased surface and drains effectively in obedience to a well-known law of physics. Of course if allowed to remain longer than three or four days, it may become saturated with mucus and will not then drain so perfectly. Its effect is to deplete the uterus and appendages by rapid osmosis, and a free discharge, and in a marked degree promotes involution. If the uterus is well dilated, well curetted, and the gauze properly applied, by gently filling the cavity of body and neck, permitting it to protrude into the vagina, no one need have any apprehension or disappointment as to its action.

DISCUSSION ON PAPERS OF DRS. LEWIS, FERGUSON, FAIRCHILD AND GRANT.

Dr. JOSEPH EASTMAN, Indianapolis—Drainage which does not drain is useless; drainage which impairs drainage is worse than useless. Dr. Savage laid down the law with regard to uterine contraction of the fundus; that an accumulation of gauze or any substance in the body of the uterus secures the contraction of the cervix. In those cases to which the Doctor referred I use a metallic substance in the cervix to secure contraction of the fundus, thereby lessening the area of surface for the absorption of septic material.

In abdominal drainage for appendicitis or other purposes I can not any longer trust to gauze drainage in the lips of my wound as I have found it strangulated and drainage arrested. I would suggest in the place of gauze a metallic or some hard rubber drainage, like the plug of Wylie, in addition to gauze drainage in order that it may remove material, and not place some foreign substance in the cervix which impairs drainage.

Dr. ALBERT GOLDSPOHN, Chicago—I wish to say a few words regarding the paper of Dr. Fairchild, endorsing his ideas *in toto*, and wish to say that not sufficient distinction is made between the puerperal uterus and the non-puerperal or ordinary gynecologic uterus in pathology and treatment. If we think for a moment of the consistence of the former and the consistence of the latter, how great a difference there is, and how great a difference there is in the condition of the lymphatics in the former as compared with the diminutive size of those structures in the latter, we can readily see how curettage of the puerperal uterus should not aim at doing anything to the lining of the puerperal uterus, but this measure should be resorted to simply to facilitate the extrusion of what stands on top of the mucous membrane, and the idea of using a sharp curette, particularly a small one, is most abominable. I have seen the evil of this repeatedly in the hands of other physicians. If we use a curette at all it should be a blunt one and large so as to be able to rake as large a surface with each stroke as possible. But in conjunction with the use of a large blunt curette we must bear in mind the Emmet curette forceps, which of all things that Dr. Emmet's name is attached to, I appreciate the highest for this work.

Dr. H. G. WETHERHILL, Denver—I have maintained that the curette in acute septic conditions is very much more likely to do harm than good. If used at all, it must be used to remove a foreign body and must not be used with the intention of denuding uterine surface, thus opening up new avenues for infection. The position so long taken by our President (Dr. Price), is the one I take, namely, that the finger is the instrument of instruments wherever it is possible to use it. Where it is not long enough, then possibly a dull curette or the placental forceps of Dr. Parvin or the forceps alluded to by Dr. Goldspohn may be used. Only a little while ago an instance of this kind occurred in this city, the case being one of induced abortion. The woman was neglected for a long time until serious symptoms arose, when she was seen by one of the best practitioners in our city, who, nothwithstanding the critical condition in which she was, sent her to the hospital with a pulse of 120 and other symptoms accompanying it, and realizing that she was in a condition for radical work, he curetted the uterus. The next day she was worse when I saw her with him, and we concluded that general peritonitis existed, and that there was little chance of a favorable result under any circumstances, and that one chance was in the direction of opening the abdomen and thoroughly cleaning out the focus, which had gone beyond the uterus, and in that way making an effort to save her life. The abdomen was opened and the peritoneum was covered with lymph clear to the diaphragm. The point I want to make in connection with this case is this: What possible use is the curette going to do when the infection has gone outside of the uterus into the lymphatic and involved the peritoneum? As I have said before in this connection, you may just as well excise a vaccine mark after the eighth day to prevent the effects of vaccination. It is entirely beyond your reach, and I maintain further that no man can say absolutely when that point has been passed.

Dr. MILO B. WARD, Kansas City, Mo.—I believe we have much trouble in these cases because we use irrigation. We do not dilate the cervix enough and try to wash out the material we ought to get out with a curette or with the finger or tampon of gauze. We dilate the cervix a little and try to wash out the débris with water, and we nearly always have a chill afterward, which means a septic infection results from water being used. It is my judgment that we have more trouble caused by the finger-nails of physicians and surgeons in the way of sepsis than by any other one cause. When I die, Mr. President, I want this epitaph put at the head or foot of my grave, "Here lies the greatest crank on finger-nails in the world, except Dr. Joseph Price."

Dr. WILLIAM H. HUMISTON, Cleveland—In cases of delivery at term where symptoms arise indicative of retained products of conception, we should first explore the uterus without doing any damage and determine whether there is material there or not. If so, remove it carefully, and thoroughly cleanse the uterus. You can remove it with the finger, a dull scoop, but not with a sharp instrument, as with a sharp curette you will open up new channels for infection. If you have a case with a history of criminal abortion where drastic measures have been used to bring it about, undoubtedly the infection has extended beyond the uterus into the lymphatics and involved the broad ligaments, etc., and you may curette such a uterus until you are gray headed and do nothing but damage.

Dr. F. F. LAWRENCE, Columbus—One point in regard to the second paper. So far as the first paper is concerned, I am in accord with a number of the speakers that in puerperal septic conditions of the uterus we should not use a curette. The point I wish to make is with reference to the shape of the uterine cavity, the angles at the fundus. I believe we do harm when we express the opinion that curettage is a simple operation. I believe more women have been killed by both immediate and remote conditions by the improper and unskillful use of the curette than by any other gynecologic means or effort. It is utterly impossible to clear out the cornu of the uterus in diseased conditions with a large sized curette. It must be a small curette. If you curette the lower surface or mucosa and leave the cornu with infected material there, what good is done? What is the possibility of preventing subsequent and almost positive or continued infection extending into the tubes? As to the disappearance of pus tubes following curettage, possibly such a thing is trne, but I have always feared personally to use the curette in cases in which I have reason to believe there is pus in the tube. There may be a thin portion of the tube, and traction and manipulation of the uterus, which is necessary in these cases, may carry the infection to the general peritoneal cavity and develop a septic peritonitis. I think we are safer in any case, where we have reason to believe there is pus, to remove it thoroughly and thus get rid of any possible source of infection.

Dr. T. M. BURNS, Denver—I have a few words to say in favor of the sharp curette. In the first place, I do not consider it a hoe nor a crowbar. I consider curettement of the uterus an exceedingly delicate operation, and it must be done with great care. It may be compared, as regards delicacy, with the extraction of a cataract from the eye. If we have an infected uterus with retained placenta, the retained placenta is a focus of infection, and the remnants of placenta or rotting mass should be removed promptly and as thoroughly as possible. If you can do it better with your finger or dull curette, all right. I can do it better with a sharp curette. It does not require so much force to do it. It seems to me we have to use a greater amount of force with a dull curette than with a sharp one, and thus do a greater amount of violence to the uterus. If curettement is done carefully and properly with a sharp instrument there is very little danger.

Dr. B. SHERWOOD DUNN, Boston—I rise to endorse the position taken by Drs. Wetherhill and Goldspohn. The curettement of the uterus is by far a more dangerous operation than that of abdominal section, and I think the consensus of opinion of gentlemen who have had a large hospital experience will be that more women are crippled for life by the use of the curette, either dull or sharp, in the hands of an incompetent general practitioner or a gynecologist in embryo, than any other one procedure in surgery. I have myself removed not less than thirteen uteri subsequent to incompetent curettement. I believe the consensus of opinion of the best surgeons is opposed to the use of the sharp curette in post-puerperal conditions. It is only necessary to look at the literature to ascertain the number of uteri that have been perforated by the sharp curette in the hands of careless practitioners. The post puerperal uterus is a large, soft, soggy organ with practically no membrane lining it. The postpartum symptoms are equally apparent, only a few hours intervening between parturition and the rise of temperature and pulse, showing postpartum infection by reason of other foci of membrane or placenta that has been left. I am absolutely convinced that these foci of infection are more readily and perfectly removed with the wire curette than by the sharp instrument and it does no injury to this disorganized organ, for it certainly is disorganized at the moment you operate upon it for any postpartum pathologic condition.

In regard to the case reported by Dr. Ferguson. It was my fortune during my hospital service in Paris to have a similar case come into my hands. It was so unusual that a number of my masters were present at the operation. After opening the abdomen we found posterior to the uterus and filling up the posterior cul-de-sac a large hematoma as large as a fist, impinging upon the cul-de-sac of Douglas. The ovary was partially coalesced upon the wall of this tumor; the Fallopian tube was permeable with the cavity of the uterus, as was the one in the case recited by Dr. Ferguson. On the opposite side there was a pervious tube with a large edematous, badly cystic ovary unattached to the tumor, which was of minor importance, and then the one point of cardinal importance in the case was that the uterus was filled with the tumor which swelled it, and at the point of the internal os, where the congenital atresia had probably commenced, there was a sharp delimitation of the tumor. The external os was conical on account of delimitation. We decided that so far as motherhood was concerned the organs could be preserved. We closed the abdominal incision; I resected the uterus at the point of its vaginal insertion, and there was a little white spot in the center of the uterus where the canal should have been, and with the thermo cautery I opened what should have been the canal and when I withdrew the cautery the pressure was so great that the blood and water contents were thrown over my face and garments. Two years afterward this woman bore a child. Three months afterward I did a subsequent operation, removing a large hematoma on the left side.

Dr. GEORGE J. ENGELMANN of Boston—In regard to Dr. Lewis' paper, some of the points he has made have been lost sight of in the discussion of the surgical points, which are always more interesting. And it was well, too, that the curette was taken up, because it is a safe instrument in skilled hands, and yet I know, as you all do, of so many sad cases throughout the country. But I was surprised to see in the reports of a large hospital a mortality of 2 per cent. It ceases to be a trifling operation when we have this mortality in skilled hands, and from the days of the wire loop of Thomas I have fought the dull curette. It is a sharp knife and a sharp curette which the surgeon wants. A dull instrument will do mischief, that is, in the non-puerperal uterus. The dull curette is a diagnostic instrument, but only the sharp curette should be used for surgical purposes. In the puerperal uterus I have used the large sharp spoon of Simon. It is not a curette, but a wire loop with which we bring out the detritus. Dr. Lewis has called attention to the fact that we must treat cases, not as ideal circumstances demand, but as the existing conditions demand, and this is frequently forgotten, and in all our discussions I believe it is overlooked. We invariably seek the treatment as it should be under the most favorable circumstances, when the facts are that we meet with cases in actual practice and must do the best we can for them under very unfavorable conditions. Cases that come to our out patient departments are too much neglected in many of our large institutions. We must attempt to do something for them; there may be cases which go into the hospital, and we must attempt to relieve them, and Dr. Lewis has placed these points before us in his paper and has given us the methods he has pursued in ambulatory cases. If a patient presents herself whose case is inoperable, she probably receives an astringent or antiseptic douche, and then goes.

Dr. S. C. GORDON, Portland, Maine—I fully agree with the gentleman who said that curettement of the uterus is a very serious operation. A patient should be prepared for a curettement with as much care as for an abdominal section, and the most important point in the curettement is that you should dilate the cervix beyond all question. Simply putting in a dilator and opening it an inch or an inch and a quarter is not sufficient dilatation by any means. You can not be sure of washing out the detritus in the uterine cavity until you have overcome the constriction by proper dilatation. I do not like the use of chemicals in the uterine cavity, but I wash out with sterilized salt solution. I also believe it is important for at least twenty-four hours to put in a tape, as I do not like packing the uterus, and this will give you drainage that you can not get in any other way. We know how important it is to have drainage, and I believe by curettement, in a great many cases, we can avoid what has been and is being done so

badly, namely, operations for closure of the lacerated cervix. I scarcely close a lacerated cervix now at all. I find few cases in which I have to do it, but I have seen so much harm in treating so many cases of pus tubes following trachelorrhaphy, that I think it has done ten hundred times as much harm as it has done good. I agree with Emmet fully in that matter, that it is a serious thing to close a lacerated cervix. But the beginner in gynecology thinks that trachelorrhaphy is a simple thing to do. By doing it we close the passage and we entirely prevent the most important thing, and that is drainage, and I had a good deal rather instruct young men never to do a trachelorrhaphy, but to resort to dilating and curetting, telling them that they will do the patients a great deal more good and very much less harm.

Dr. EMORY LANPHEAR, St. Louis—If you will but recall the pathology which underlies postpartum and post-abortal septic infections you will come upon a common plane. In the case of saprophytic infections we have no implication of the uterine mucosa until very late, in which instance the dull curette or the finger, after proper dilatation, is all that is necessary. When we have the staphylococcus pyogenes aureus, albus and citreus affecting the uterus, then must we remove the infected tissue, which is the uterine mucosa, and which can only be accomplished by the use of the sharp curette. When we have streptococcus infection, no curette under heaven will do the patient one bit of good.

Dr. LEWIS (closing the discussion on his part)—Four years ago, at the time the large dispensary of the Chicago Policlinic was placed in my hands, I had been in the habit for many years of having charge of the gynecologic and obstetric wards of the County Hospital of our city. I had operated on pyosalpinx and the usual diseases, and I had absolutely no knowledge of the cases presenting themselves at the dispensary. The first day I assumed charge there, the first patient who presented herself had a pyosalpinx as far as I could diagnose it, and I advised immediate operation. She said she was unable to go into the hospital because her children were ill and she had to take care of them. The next patient had a laceration of the perineum with rectocele; I advised operation in her case, and for sociologic or economic purposes, she was unable to accept that advice. And so it went on, case after case appeared at the dispensary which in my judgment required surgical interference, and they were unable to accept the advice I gave them. Under the circumstances I felt it was necessary to do something, and I persisted in the treatment which I have outlined to you today, and the results were gratifying, and in many instances most surprising, to me. For that reason I have taken the opportunity of presenting to you cases that will prove very surprising to others as well as myself.

I should like to go into the subject of the use of the curette, but time does not permit, and I will say nothing further about it, except to remark regarding the statement made by one gentleman who spoke of perforations of the uterus, and intimated that the sharp curette was responsible for such perforations more frequently than the dull curette. As a matter of statistics, the uterus has been perforated with dull instruments more frequently than with sharp curettes. The probe, the uterine sound, and the silver catheter have caused more uterine perforations than sharp instruments. This is simply a matter of statistics, which I have looked up.

Dr. GRANT (closing the discussion on his part)—There was one statement made by one of the speakers which I think should not go unchallenged, namely, that because the infection has gone beyond the uterine endometrium and has infected the tubes, it is useless to remove the diseased condition in the uterus. I do not think any more fallacious surgical principle could be advanced, that simply because we can not reach the disease all at once we should do nothing. That is about the feeling of the criticism of one of the speakers, who believes that we should not curette a uterus which is really the *fons et origio* of the trouble. The most important thing is to scrape away all of the diseased tissue that has caused the trouble and which if left continues to infect neighboring structures.

I very much regret that some of those gentlemen in the discussion did not devote a little more time to those cases of gonorrheal origin which are so very frequent and of very great importance. I was in hopes of hearing something from some of my distinguished friends here in reference to the early treatment of these cases. They are certainly common and overlooked. These cases should be curetted more frequently.

With reference to the question of curettage and drainage, one of the gentlemen made the statement that this practice might cause infection on account of the free raw surface which is made by the curette. I have stated that if the septic material is thoroughly removed there was very little danger. As a matter of fact, there are few men who have had a large experience in the early treatment of gonorrheal cases of this form. That is why I introduced the cases I did in which I have had a surprising experience.

PROPHYLAXIS OF DISEASES OF WOMEN.

Presented to the Section on Obstetrics and Diseases of Women, at the Forty-ninth Annual Meeting of the American Medical Association, held at Denver, Colo., June 7-10, 1898.

BY DAVID W. BASHAM, M.D.

NEAL, KANSAS.

Since the science of hygiene is justly allowed to occupy so important a place in the literature of general medicine, I deem it a duty incumbent upon those engaged in gynecologic and obstetric practice to endeavor to elevate the prophylaxis of the diseases of women to the same exalted plane.

Generally the average gynecologic essayist, disdaining to concern himself with the ordinary affairs upon which our clients so much need good and wise counsel, endeavors to elucidate his own or some fellow practitioner's method of extirpating the internal genitalia, or some part thereof, from the female pelvis. All of this is laudable, because it serves a beneficent purpose as concerns both mankind and the profession of medicine. But if it be noble and great to emancipate the human body from disease and suffering by the dexterous use of the scalpel, scissors, and sterilized catgut sutures, how much better is the rendering of these appurtenances of our art unnecessary. This paper is not an argument for conservatism in the treatment of existing pathologic conditions, but a simple effort to disseminate the doctrines of preventive therapeusis. As often as I am called upon to disembarrass a patient of important organs rendered useless and intolerable through pathologic metamorphoses, the result, perhaps, of a non-aseptic accouchement, I promise myself to labor with renewed assiduity to inculcate the tenets of preventive medicine, which shall be the medicine of the future.

Owing to the anatomic construction of woman, the female pelvic organs are far more vulnerable to the influence of pathogenic agents than are the analogous organs in the opposite sex, because in the former a readier and more commodious medium of communication exists between the cavities of the genital tract and the atmospheric world. The same anatomic design conduces to the easy genesis of pathogenic micro-organisms within the series of cavities constituting the genital system. This arrangement, which is indispensable to the perfect operation of the viviparous plan of reproduction, which provides that after having attained a certain stage of development within the maternal body, the fetus shall be forcibly extruded into the world, unavoidably entails a greater or less degree of traumutism to all the structures concerned. These facts serve to explain why the pelvic organs in woman are so much more frequently the seat of pathologic changes than the same organs in man. All of the elements necessary to the process of infection are present in the act of childbirth, and also in a less accentuated form in many other acts inseparable from the functions peculiar to woman. The things requisite in the process of infection are: violence, to produce a breach in the tissues sufficient to admit of the ingress into the circulation of germs or putrid material, and the existence of certain conditions which facilitate the introduction of such germs or putrid material into the cavities of the system of hollow organs known as the genital tract, and

where the breaches into the circulation exist, and where also are found fluids and coaguli to serve as media and nidus wherein rapid multiplication takes place. The question of prophylaxis of diseases of the female pelvic organs then resolves itself into two principal propositions: the first of which consists in the minimizing of traumatism to the genital mucosæ, and the second is the preclusion of the introduction of disease micro-organisms from the extraneous world into the hollow organs constituting the genital system.

It will be seen then that the major part of gynecologic prophylaxis rests in the degree of perfection with which the art of obstetrics is carried into practice. It is a fact beyond refutation that an enormous proportion of all gynecologic affections have their origin in the parturient act, and the week in bed that follows. Endometritis, salpingitis, ovaritis, cystitis, and nephroptosis, are some of the conditions which are often simply sequelæ to the act of parturition and the puerperal month.

So much depends upon the work of him who essays to minister to the needs of woman in the hour of travail, that it is not easy to overestimate the importance of the offices of the accoucheur in the matter of diminishing the frequency of pelvic diseases in the female. The scientific obstetrician has well accomplished his duties, so that it is no longer a question of profounder knowledge, but simply a matter of the better application of the principles already well known to the profession. Of all the members of the medical fraternity who should act with an eye to the future condition of his client, there are none upon whom this obligation should rest with greater weight than the obstetrician. The prompt application of surgical principles to the treatment of traumæ received during childbirth may avert many of the troublesome sequelæ to that act which often terminate in serious pathologic changes, and often demand radical measures for relief. It is not at all improbable that uterine cancer is frequently the result of a neglected cervical laceration. The immediate restitution of a lacerated perineum may avert the occurrence of a case of prolapsus which would require hysteropexy, or even a case of procidentia uteri with chronic endometritis and hypertrophy of the organ, which might demand hysterectomy to effect a cure. Thus it is throughout the entire catalogue of minor accidents and the corresponding surgical procedures for their relief.

There are some grave conditions which owe their inception to accidents occurring during the age of pubescence, or during the first years of menstrual life. It is here that the general practitioner might find an opportunity to enhance his usefulness at the expense of the neurologist. It is reasonable to believe that many cases of aberration of nerve function might be prevented by well-directed medical attention during the early years of menstrual life.

In sum: the prophylaxis of the diseases peculiar to woman may be embodied in a more perfect application of the principles of obstetrics in actual practice; a profounder understanding of the accidents occurring so frequently at the age of pubescence, and finally greater attention to the hygienic regulations which should govern daily life.

Radiographs of Encapsulated Trichinæ.—Radiographs of encapsulated trichinæ in the muscle of a cadaver have been secured at Würzburg, the birthplace of the Röntgen ray.

GONORRHEA AS A FACTOR IN PUERPERAL FEVER.

Presented in the Section on Obstetrics and Diseases of Women, at the Forty-ninth Annual Meeting of the American Medical Association held at Denver, Colo., June 7-10, 1898.

BY ALBERT H. BURR, PH.B., M.D.

ADJUNCT PROFESSOR OF PRACTICE OF MEDICINE, COLLEGE OF PHYSICIANS AND SURGEONS, ATTENDANT PHYSICIAN TO PROVIDENT HOSPITAL.

CHICAGO.

The methods which have revolutionized modern surgery as the direct results of the teachings of Lister have been more or less efficiently carried out in the practice of modern obstetrics. The new science of bacteriology and the accumulating evidences of the pathogenic nature and far-reaching effects of certain micro-organisms have invested the subject of the prophylactic, aseptic and antiseptic protection of the parturient with increasing interest and importance. Notwithstanding the advancements along these lines, the query arises, why is there not greater freedom from septic complications and fatal issues in the service of those who carry out the most approved measures in the practice of midwifery? In other words, are there not frequently sources of danger within the mother herself, antedating childbed, which ordinary methods fail to avert? I desire to emphasize the importance of these vital questions.

Since the discovery of the gonococcus which Neisser announced as the specific cause of gonorrhea, in 1879, two important discoveries have placed his claims beyond all cavil; first, the Gram method of staining, by which this germ is differentiated from all other diplococci, and, second, the improved culture methods of Bumm and Wertheim (1889–1891), by which its true specific character was established by the four immutable laws of Koch. It is now possible to scientifically demonstrate the multiple roll of this ubiquitous germ in its capacity for pathogenic mischief. A glance at the biology of the gonococcus will help us better to comprehend its possibilities for doing harm in the puerperium. Its habitat is the mucosa and glands of the genito-urinary organs of the human race. It is not known to exist anywhere in nature apart from the human body. It perishes quickly when removed from its host. It is cultivated with difficulty on nutrient media of human blood serum or urine. It dies very soon in water, loses its virulency when thoroughly dried, and is easily destroyed by ordinary antiseptics. Notwithstanding all this, the germ is most persistent in its normal surroundings. It is able to exist in various degrees of chronicity for indefinite periods of months or years, retaining its power to invade new territory and regain its old-time activity under favoring circumstances. It requires no solution of continuity or lesion of any nature to prepare the soil for infection. It is able to penetrate readily the epithelial, follicular and glandular structures of the mucous surfaces everywhere. Nor does it stop here. It also penetrates the submucosa and adjoining muscular walls. It makes its destructive pilgrimage through lymph channels into the circulation itself, and sets up dangerous lesions in distant organs, like the heart, brain and articulations. This power of extending its field of operation by penetrating almost every tissue of the body, together with its persistence in favorite localities while awaiting its opportunities, constitute its most dangerous properties as a pathogenic organism in childbirth.

Again, it is essentially an irritant pus germ. Its

advent upon uninfected mucosa is quickly followed by copious, purulent discharges in which at first no other pathogenic germs are found. It is not self-limited and hence immunity is never established, although degrees of tolerance in the form of chronic pathologic changes in members may exist for indefinite periods. According to Finger and others, the nature of the epithelium of the mucosa has an important bearing on the behavior of the gonococcus. The germ remains superficial on mucosa covered with squamous epithelium, but it quickly penetrates into connective tissue under cylindrical epithelium. He found that injections of pure cultures into the peritoneum and joints of animals produced rapid and acute inflammations, while injections of filtered culture-fluids gave negative results; showing that the pathogenic effects were caused by the living germ itself and not by its products. Hence we may readily understand its ability to produce abscesses wherever swollen ducts, canals or tubes hinder free drainage or where trauma has given it entrance to the systemic circulation. Bujwid has reported the case of a gonorrhoic male who was seized with a chill two days after catheterization. These chills were repeated several times in the next ten days, followed by intramuscular abscesses in various parts of the body, the pus from which afforded pure cultures of the gonococcus; thus, showing its ability to produce pyemic conditions. Not only is it a source of danger in itself, but its presence prepares a suitable field for the culture of other germs, even more dangerous in the presence of the slight or severe trauma of parturition. The lowered vitality of infiltrated mucous and submucous structures, the hypersecretion of muco-pus, the débris of swollen and exfoliated epithelium offer a most favorable soil for mixed infection. The gonococcus will share its possessions in apparent harmony with other pathogenic germs, or, at an indefinite period, quit the claim in their favor. We believe these facts are overlooked in estimating the rôle played by the gonococcus in childbed fever. We have developed slides from a case of chronic gleet in a patient suffering from arthritis of the knee, two years after his acute infection, in which the pus-cells contained gonococci, while the field surrounding these cells was filled with staphylococci. We have found the same microscopic showing in discharges taken directly from the cervix uteri of a patient suffering from her first attack of salpingitis, four years after her primary infection by her husband and three years after her only confinement, at which time she suffered from febrile arthritis of the shoulder, her babe having gonorrheal ophthalmia at the same time. Pyosalpynx and a laparotomy are probabilities in her future history. It is to be hoped she is now permanently sterile. In the gonorrhoic female sterility is a conservative process, a blessing in disguise.

Having reviewed some of the most important characteristics in the life history of the gonococcus, let us examine the opportunities it has for complicating and endangering the puerperal state. It has been variously estimated that from 10 to 30 per cent. of all women became gonorrhoic. I believe the latter figure is nearer the truth. This is better understood when we consider that the majority of males become infected sooner or later, and that the greater portion of them remain in uncured chronic and latent stages for indefinite periods, during which time they are capable of imparting the disease. Indeed, the proportion of both sexes who never are completely cured is much larger than is commonly supposed. It is doubtful if chronic or residual gonorrhea in the female, by reason of its inaccessible location, is ever completely cured during her child-bearing years. If the disease were confined to the vaginal mucosa, lined as it is with squamous epithelium, it would remain superficial, as Finger has pointed out, and would be accessible to antiseptic treatment. In its urethral and vulvar locations it could be readily dislodged also, but we must remember its predilection for the ciliated, columnar epithelium of the endocervix, endometrium and fallopian tubes, and its rapid penetration of this kind of epithelium to deeper structures. Fournier's statistics show that one-fifth of all women contracting gonorrhea develop salpingitis. If this be double, sterility is usually entailed (Terillon). The radical cure of such a state is an almost hopeless problem.

Wertheim, discussing endometritis before the German Gynecological Society said, "Next to the urethra, the uterus is the favorite seat of gonorrhoic infection. It is directly infected and may be confined to that organ. It exists as an interstitial endometritis. Krönig found gonococci in many examinations of the lochia along with other pathogenic micrococci, especially strepto- and staphylococci." He concludes that gonorrhea extends to the endometrium during the puerperium, and may give rise to fever without a trace of mixed infection.

At the puerperium the disease may be recent, in the form of acute or subacute urethritis or vulvo-vaginitis, or it may have existed in chronic forms a long time in such favorite localities as the glands of Bartholini, in the columnar epithelium and glands of the cervix, or having preceded conception, there may be a chronic gonorrheal salpingitis or unilateral pyosalpynx. Fehling observes that gonorrhoic endometritis and perimetritis in pregnancy is now an established fact, and urges careful treatment of women who have been infected during or after conception, to prevent symptoms of a still graver character. Max Madluer demonstrated the ability of the gonococcus to pass from the endometrium into the uterine muscles and set up inflammatory processes. This, he says, is especially the case in the puerperium, and may result in abscess formation. Infection of the peritoneum through the uterine wall is a possibility, and, he believes, explains the fact of perimetritis without implication of the adnexa.

Fehling says absorptive fever is not rare in patients suffering from gonorrhea during pregnancy, and pus-tubes are often noted. In such a state of affairs parturition opens up many channels for infection and constitutional symptoms of varying degrees of sepsis. A ruptured perineum, a vaginal erosion, a lacerated cervix, a denuded placental site, are so many open gates for the invading gonococcus or for other dangerous germs, which might not have been present but for a soil rendered favorable by gonorrhea. If pyosalpinx exists, the condition is fraught with the gravest possible dangers, which human skill may be powerless to avert. It is evident, then, that many mothers run the gauntlet of hidden, and oftimes unsuspected, foes during confinement on account of gonorrhea alone.

DIAGNOSTIC POINTS.

If possible, an early examination should be made of every prospective mother, especially if she be a

primipara, for the reason that this class is in the greatest danger, because of more recent infection and less constitutional tolerance of the germ. 1. Any muco-purulent discharge from urethral, vaginal or cervical orifices should be regarded with suspicion and should be submitted to microscopic proof and treated according to findings. 2. The existence of a vulvar abscess or the discharge of pus from a Bartholinian gland on pressure is presumptive evidence of gonorrhea. 3. The presence of gonorrhoic ophthalmia in the new-born is positive proof of maternal infection. If the mother be a primipara, she will be extremely fortunate if she escapes puerperal complications. 4. The presence of arthritis with pyrexia during gestation or during the puerperium makes the diagnosis of gonorrheal infection highly probable. Gonococci have been found frequently in inflamed joints as the active cause of irritation, swelling, pain and fever, which are the expressions of a systemic infection, erroneously styled gonorrheal rheumatism. I have seen acute febrile arthritis in the seventh month of pregnancy, which was not correctly interpreted until it occurred in childbed, without any pelvic symptoms whatever. Gonorrheal ophthalmia in the babe, however, cleared up the nature of the ante- and post-partum arthritis of the mother.

In a series of cases reported to this section by the reader at the Atlanta meeting of 1896, there were three fatalities after perfectly normal labor in primipara, in which gonorrhea was a clinical feature during pregnancy. In one of these sepsis developed twenty-four hours after delivery, from the discharge of an extremely fetid tubal abscess into the uterus, when the detached secondines had freed the uterine orifice, resulting in general peritonitis and death on the seventh day. The second died from recurring pelvic peritonitis and exhaustion one month after confinement. The third, with no pelvic symptoms whatever, developed multiple arthritis with hyperpyrexia and acute systemic infection, which terminated her life on the twenty-seventh day, possibly from ulcerative endocarditis. Of the non-fatal cases, the mothers all had either acute metritis or arthritis, or both, with chills and pyrexia, and all of the babes had ophthalmia microscopically shown to be gonorrhoic.

TREATMENT.

1. *General prophylaxis.*—Prophylactic measures are of the greatest importance. These may be: 1. Educational. Our youths should be instructed at the proper age in our public schools concerning sexual physiology, sexual hygiene and sexual morals. 2. Executive; through the sanitary supervision of all classes and individuals liable to spread gonorrhoic infection. 3. By legislative enactments, regulating the marriage license. We believe that no candidate for marriage should receive a license who has not filed a certificate of health from a competent medical official showing freedom from all contagious diseases.

2. *Specific prophylaxis.*—Once a female is known to be infected with gonorrhea, her treatment should be conducted even more persistently and more carefully than in the male, for the infection more readily passes to inaccessible locations and the remote effects are far more subversive of health and dangerous to life itself. It is unfortunate for women that gonorrhea is so often overlooked in their sex in its acute and subacute stages. Undoubtedly if it were recognized and some sort of antiseptic treatment instituted as early and universally as in the male sex, many disasters would be averted. The plan of treatment depends upon location and the stage of the disease. So long as it has passed no farther than the urethra, vulva and vagina and their special glands, drainage and irrigation with solutions of silver or potassium permanganate are effective. If the endometrium is involved without tubal infection, curettage and irrigation may cure. If the tubes are infected, as evidenced by acute or chronic salpingitis or pyosalpinx and recurring pelvic peritonitis, no local treatment can eradicate the disease. If, now, infection has taken place at the time of or during the term of gestation, much may be done to avert child-bed complications. Every pregnant woman should be carefully inspected at least a month preceding child-bed. Her physician should know of the sanitary condition of her parturient canal and relevant organs in order that her puerperium may be free from all preventable dangers. Inspection of parts and microscopic examination of suspicious secretions from urethra, vulvar glands, vagina or cervix uteri will determine the question of infection. Urethral or vaginal irrigation of potassium permanganate solution, 1–2000, drainage, curettage or dissection of infected vulvar glands and topical applications of nitrate of silver solution, 10 per cent., to the endo-cervix will place a patient in the most favorable condition for her confinement.

3. *Child-bed treatment.*—Ante- and post-partum diagnostic symptoms of gonorrhoic infection have already been given. Now, that such a contingency exists, what should be the treatment in child-bed? Vaginal irrigations of sterilized water or antiseptic solutions after normal labor have been generally abandoned by obstetricians, for obvious reasons. Labor complicated by pre-existing gonorrhoic infection is not a normal state, and I believe justifies the irrigation of the vaginal canal twice daily with warm potassium permanganate solution, 1–2000. The procedure is devoid of danger and may prevent extension to the endometrium appendages and the pelvic peritoneum. In the event of symptoms showing endometritis, intra-uterine irrigation carefully done with the same solution has given good results and I believe is rational treatment. Other external local applications and internal systemic treatment for depletion, sedation and elimination will suggest themselves according to the exigencies of the case. In the fulminating forms of puerperal fever, little can be done. If these are due in any way to gonorrhea, it is from secondary mixed infections of virulent types made possible through previous gonorrhea. Here the antitoxins are on trial with some promise of success.

CONCLUSIONS.

1. Gonorrhea is a widely disseminated disease, especially persistent and dangerous in females.

2. Gonorrhea is directly or indirectly a factor in puerperal sepsis, and accountable for a larger percentage of complications and fatalities than commonly supposed.

3. Prophylactic measures, general and specific, are most important in averting the septic dangers of childbed.

Antiseptics and Diphtheria Toxins.—Salkowski states that guinea-pigs survive fatal doses of diphtheria toxin if salicylaldehyd, carbolic acid or formalin be combined with it. The toxin seems to be chemically rather than mechanically affected, and the body temperature is evidently a factor in the result.—*Munich Med. Woch.*, June 28.

COMPOUND INTRA-UTERINE FRACTURE OF THE FEMUR, WITH REPORT OF A CASE.

Presented to the Section on Obstetrics and Diseases of Women, at the Forty-ninth Annual Meeting of the American Medical Association, held at Denver, Colo., June 7-10, 1898.

BY A. D. WILKINSON, M.D.

LINCOLN, NEB.

The two most prolific causes of fracture are falls and blows. The few recorded instances of fracture of long bones by unaided muscular action can be ascribed solely to violent and sudden flexion. It is a generally received opinion, however, that no long bone can be broken in its shaft by the mere contraction of its muscles. But it is a conceded fact that abnormal increase of the muscular power, as during convulsions, may be sufficient to account for it. Lente has seen both femurs broken in epileptic convulsions in a child 12 years of age. Park says the compression of uterine contraction and external violence may produce an intra-uterine fracture. Professor Gurlt, who has discussed the subject of intra-uterine fractures in an exhaustive paper fortified by cases, published in Berlin in 1857, and later in his classic "Treatise on Fractures," believes that many intra-uterine fractures result from external violence received by the mother during the advanced period of pregnancy. He says, in such cases the force may be transmitted to the fetus, fracturing its bones without at the same time leaving any marks of violence upon the maternal elastic abdominal walls. The long bones are the most apt to be broken, which from their shape are the most friable, and especially those of the leg, which, from the bent-up position of the fetus, are most exposed. The angular distortion observable in these cases is due to the pull of the muscles after the fracture, and the cutaneous dimple which invariably corresponds to the projection of the bony angle is the scar resulting from the perforations of the integuments by the sharp ends of the bones.

Professor Brinton, in the second volume of the "Transactions of the American Surgical Association," has reported two cases of intra-uterine fracture, with remarks on fifty-one cases already reported by different writers, and concludes from his own observation and from a study of the reported cases, that external violence received by the mother is certainly in many cases a sufficient direct cause of fracture of the fetus in utero. He states he is unable to understand why it should be held that force from without can not reach the fetus, and why it is not necessary to make muscular action as an efficient cause of fracture. It is alleged that the child swims in the bag of water, and therefore is as removed from outer evidence as is a fish in a pond; but a moment's reflection, he says, will show us that the protecting influence of the amniotic fluid is over-estimated. Ask a woman who has been pregnant and she will often tell you that the movements of the child are felt as if just beneath the integument; in fact, to use a woman's expression, it is as if the child were trying to get out through the skin. It seems to her not that the child is deeply placed, but rather that it is almost under her touch; that she can feel with the tips of her fingers, as it were, the hardness of the head of the fetus, and the tremor of its limbs. He further states that it is this very exposure of the child which gives rise to, fosters, if I may so say, the instinct of the woman to protect her future offspring, and leads her to guard her person with her hands alike in passing through a crowd of people or in treading her way among the many articles of furniture which encumber the modern house. A mother's feelings teaches the woman that the slightest harm to her may reach her child, and I think we may learn from her silent teachings.

The case I wish to report occurred during my service at the Home for the Friendless in the city of Lincoln, in 1894.

Mrs. P., aged 25; multipara; an epileptic; gave birth to a child which in every way seemed to be perfect, except a shortening of the right lower extremity, which showed considerable shortening. Thinking perhaps it might be a dislocation of the hip joint, I placed the child on a table, but found all the joints to be perfect. The right femur was shorter than its fellow, and a closer examination revealed a cicatrix in the anterior aspect of the middle third and that the femur had suffered a fracture—a compound fracture—in utero and had united at an obtuse angle. Two or three months later this angle had faded away considerably, until the bone assumed very nearly a straight line. I lost sight of the case for a time, but when the child commenced to walk the mother consulted me relative to securing an apparatus for the short leg, saying the baby was in perfect health and that it needed something to assist it in walking.

I am unable to assign a positive cause for this fracture. There is a history of an epileptic seizure of the mother in the fourth or fifth month of pregnancy, in which seizure she fell violently over a stove, but aside from the fall no pain followed the accident. Another theory is that the husband, who afterward deserted his wife, owing to a continuance of domestic infelicity, may have abused her, either by striking her or by some other violent means causing the fracture.

My other theory, and the one I wish to call your attention to especially is, that during an epileptic seizure, a compression of great severity produced by an abnormal increase of muscular power of the abdominal muscles would be sufficient to squeeze, as in a vise, the pent-up fetus, which would at that time, most likely, be raised up against the abdominal walls, consequently being more exposed to the spasmodic contractions of the muscles or walls of the abdomen. Nothnagle says that during the grand mal increased peristaltic action of the intestines occurs, with rumbling in the belly and discharge of flatus and feces and ejaculation of semen, and that Tissot and Portal report the escape of urine with so much force even as to rise in a stream five to ten feet high.

If this state of things can occur during the epileptic seizure, what is to prevent the abdominal muscles from acting in such force as to cause the fracture of the frail and slender femur, the patient being in opisthotonos, the fetus as a result up against the abdominal walls, the brittle shaft of the femur in perfect position to receive an injury?

ANATOMIC POINTS IN ABDOMINAL AND PELVIC SURGERY.

Presented to the Section on Obstetrics and Diseases of Women at the Forty-ninth Annual Meeting of the American Medical Association, held at Denver, Colo., June 7-10, 1898.

BY C. E. RUTH, M.D.

PROFESSOR OF DESCRIPTIVE AND SURGICAL ANATOMY IN THE KEOKUK MEDICAL COLLEGE AND PROFESSOR OF CLINICAL SURGERY IN ST. JOSEPH'S HOSPITAL.

KEOKUK, IOWA.

I make no claim to know anything which no one else has knowledge of, but have observed a few things in my surgical work which proved to be of enough

importance to me that I became anxious that others might appreciate them more, and possibly save themselves and unfortunate patients trouble, suffering or life.

We often meet with adhesions between peritoneal surfaces, the legitimate ultimate result of peritoneal inflammations of all kinds, so numerous and extensive that all semblance to normal organs and landmarks is destroyed. These adhesions are always primarily conservative, but may lead to secondary grave complications. They may be so strong as to readily bear the patient's weight. The attenuation of these adhesions becomes possible when the inflammation causing it was traumatic, small in area, and a more or less constant tension was maintained thereafter. No man should for a moment think seriously of engaging in abdominal and pelvic surgery, who has not a thorough understanding of the relations of the normal peritoneum and all organs within the cavities he is to explore. He will at times find these familiar and usual landmarks obscured or obliterated. Then it is that the smallest hint may serve him for a guide, and he should be able to avail himself of it in time to save his patient's life, his own credit, and give his patient the best chance for future usefulness.

It is a well-known fact that union between peritoneal surfaces is the strongest union obtainable between the hollow viscera, and after it is a few weeks old, separation along the old line of union is well-nigh impossible. In attempts to affect separation, the peritoneum is torn off on one or other side, leaving the muscular coat or the areolar and connective tissue exposed, if the much more serious accident of opening directly into one or other viscus does not happen. If, upon opening into the abdominal cavity, we find everything a mass of agglutination, in which uterus, ovaries, Fallopian tubes, rectum, bladder, mesentery, omentum, etc., are individually unrecognizable, we may get a valuable aid in the large male sound, introduced into the bladder as a guide to the wall of this organ, and by care, may soon find our way down behind the bladder to the uterus, thence upward along its anterior and lateral surfaces to the cornua, and out along the Fallopian tubes and broad ligaments, working under these old lines and masses of peritoneal adhesions until we have found and dealt with the entire uterus and adnexa, as occasion may require.

Where the uterus is readily found but ovaries and tubes are buried in dense adhesions, connected to intestines, etc., it is usually much safer, and many times easer, to open into the broad ligament space by cutting the Fallopian tube, between ligatures, close to the uterine cornua, and begin your enucleation in the connective tissue space on the under side of the tube, beneath the peritoneum, working all the time, when possible, beneath the peritoneum, in this connective and areolar tissue space. The separation is much easier than breaking down old adhesions; the hemorrhage is usually insignificant: and, above all, you have a definite anatomical guide, instead of groping aimlessly about for something you can recognize to guide you, or tearing directly into the weakened intestines or bladder, or across the ureter. Either of these accidents may be as dangerous to the patient and as annoying to the surgeon as the original trouble for which the operation was undertaken. The best surgeon cannot afford to proceed with an abdominal operation, in dealing with adhesions, without definite anatomic landmarks to guide him, and when those which are usually made use of are gone, it becomes his duty to search out others. In abdominal work it becomes important to quickly determine which is the stomach end of a given loop of intestine. If we keep in mind the parietal attachment of the mesentery extending from the left side of the spinal column on a level with and close to the body of the second lumbar vertebra, and extending thence downward to the right, obliquely across the spinal column to end at right sacro-iliac articulation or in the right iliac fossa, we will have a basis for immediate determination of the point in question. If the loop be brought up until the mesentery is taut, with the loop parallel with the long axis of the body, the index finger should be passed into the abdomen by the side of the loop, keeping the palmar surface in close contact with the mesentery as the finger is passed down to its posterior attachment. If the finger remains all the time on the side at which it started, then up is up and down is down. If, however, it passes across to the opposite side, then up is down and down is up, or the lower is the stomach end. Should there be one, or more than one-half, turn or twist in the mesenteric loop it (the turn) and its direction, is at once detected by the finger. Peritoneal adhesions being always primarily conservative, it is very important that we should not do harm in separating parts which nature has united for the individual's protection, unless we can remove the cause for which the union was produced. If adhesions are separated, we must see to it that resulting union shall not be more harmful than the former. Omental grafts should be sparingly used to cover abrasions of the hollow viscera, because of their tendencies to contraction.

We will often serve our patients better if we evacuate the septic products which cause the adhesive inflammation and make no attempts to separate adhesions. This is often the case in appendicitis, where the appendix is lost in a pus sac, and adhesive inflammatory exudate has passed far up on to the colon and has thrown its protective bridges far out among the small intestines, so that all our accurate guides to it are lost. In such a case, before the peritoneum is reached, in making an incision close to the inner side of the anterior superior iliac spine, the muscular tissue will show evidence of infiltration or bogginess from serous exudate. This is due, not to the fact that septic material has passed *directly* through the peritoneum in the iliac fossa, but that it has, in all probability, passed along the loose connective tissue space formed by the divergence of the layers of mesentery to enclose the appendix. By following this space, the pus may appear external to the peritoneum at the base of the appendix, and often posterior to the cecum. This anatomic fact explains the large number of cases of appendicular abscesses, which may be opened extraperitoneally by the surgeon, and do sometimes so discharge without his aid. This puts at rest much speculation regarding our ability to reach and open so large a number of appendicular abscesses extraperitoneally when the appendix is normally an intraperitoneal organ, and this too, in many cases where there are little or no adhesions of abscess to the abdominal wall.

Great distention or contraction of parts of the colon, inflammatory or atonic changes may make its identification difficult, especially to those of slight experience. We should find the colon darker in color than

other parts of the intestine, but the longitudinal bands and *colica epiploica* will enable us to identify it readily in almost every instance, and a knowledge of its mesenteric or closer attachment to the parietes will be of material aid. In most cases, we should be able to pick it up and be sure of what part we have at once, without even the aid of vision. In appendectomy we often find the organ so firmly bound down by adhesions that it is with the utmost difficulty that we can separate them; in fact, often it is quite impossible. In these cases, if we can identify the peritoneal layer at any point and gain a start underneath it, we can usually enucleate the organ very rapidly and easily, doing all our separation work between the peritoneum and muscular coat. When so done, we can close the peritoneal rent and leave no denuded surface to form other troubles. We are again making use of our old plan in dealing with the Fallopian tubes. Many times our work will be greatly facilitated if we will first ligate the base of the appendix in two places, cut between ligatures, and start our enucleation process at the base, between the diverging layers of the mesentery. I have found this plan of especial help when the appendix tip was buried deeply in the pelvis under dense adhesions passing down over the external iliac artery and in contact with the ureter. In surgery of the gall-bladder and ducts, too many surgeons habitually depend on finding the fundus of the gall-bladder as an anatomic starting-point, forgetting that it may be congenitally absent, or the trouble for which the operation is undertaken has produced inflammatory adhesions and possibly buried the fundus and body of an atrophied gall-bladder so completely that he who persists in his search for it as a guide to subsequent manifestations may tear off its attachments to the liver and cause troublesome hemorrhage, and be no nearer than before to a recognition of the cause of the trouble, which is, in all probability, located in the cystic, hepatic, or common duct. In such cases, we will gain much time and save ourselves much annoyance by first locating the hepatico-duodenal fold of peritoneum, or grasp in it the common bile duct, hepatic artery and vena porta, with the foramen of Winslow beneath and hepatic and cystic ducts to the right; we can at once determine, in most cases, the location of the difficulty for which the operation was undertaken, if it pertains to the gall circulation, and with much less danger than by way of the fundus.

In perineorrhaphy work, too many cases have only a skin support, the normal perineal structures proper being in no sense restored as a supporting organ by the operation intended to relieve various forms of prolapsus, the defect being only hid; the result is altogether disappointing to the patient and surgeon, and brings this much-needed operation into disrepute.

In the flap-splitting method, in some cases the recto-vaginal septum is not located, but the vaginal mucosa only is raised, and when the sutures are introduced they cause strangulation necrosis of the vaginal flap or a large part of it, because it is impossible to get sufficient hold upon so thin a tissue without seriously involving its blood-supply in the suture clasp. The same danger occurs from a little carelessness in forming the flap on the opposite side, and there is great danger of fecal fistula. If, however, the recto-vaginal septum is followed, the separation may be made extensive enough to give any desired result in a new perineum, and no harm will result, if any care be used in suturing. I am convinced, however, that the general plan of introducing sutures in the old through-and-through manner to the highest point of separation is a great mistake, and many such sutures will cut deeply and cause prolonged irritation and often a tender perineum.

Much better results will be obtained by introducing several layers of buried absorbable sutures, which will make a more perfect approximation of all parts of the deep wound. If a through-and-through suture is used, I am sure that better results are obtained by using here the same principle that Fowler applies in his "figure 8" abdominal method, because it secures more perfect approximation of all parts than by the old plan. The purse-string tendency of the old suture method makes our resulting perineum only one-third to one-half the depth and corresponding strength we originally supposed we would be able to attain.

TOTAL REMOVAL OF STOMACH FOR CARCINOMA OF PYLORUS—RECOVERY.

BY G. CHILDS MACDONALD, M.D. (BRUX., HON.) F.R.C.S., Edinburgh, Exam. M.R.C.S., England. Fellow Medico-Chirg Society, London. Late Resident Surgeon Royal Edinboro Infirmary. Lecturer on Surgery, College of Physicians and Surgeons, San Francisco, and Visiting Surgeon, St. Mary's Hospital.

SAN FRANCISCO, CAL.

J. Patritti, Italian; aged 38 years; occupation, dairyman; admitted to St. Mary's Hospital on June 15, 1898, suffering from a tumor of the pyloric end of the stomach. The usual symptoms associated with that condition were present; as the patient was unable to speak English but imperfectly, no definite history was obtainable, but so far as we could gather, he had been ill, probably unable to work, for two and one-half months prior to entering the institution. He stated he never had any previous illness; moreover his immediate relatives were free from cancers or tumors. He complained of pain in the epigastric region, paroxysmal in character, vomiting and weakness. The physical examination revealed marked general emaciation, a distinct movable tumor in the right hypochondrium; the stomach was dilated and on stimulation of the epigastrium by rubbing could be made to contract violently, attempting to pass its contents on to the duodenum. By the clinical picture presented, I concluded the growth must have extended, at least, over a period of six months. His weight, unfortunately, was not taken. Feeling the hopeless condition of the patient, I decided to remove the whole of the stomach. To this he consented. He was accordingly brought into the operating room at 9 A.M., June 15, 1898. Ether was the anesthetic used, which he took badly, and half the operation was done without any, stimulants having to be administered hypodermically on several occasions.

The incision was commenced at the tip of the ensiform cartilage, continued down over the linea alba to half an inch below umbilicus on the right. On opening the abdomen the stomach and liver came into view, omentum devoid of fat; there were no adhesions. The first part of the duodenum and pylorus were freely movable. The great omentum was tied in portions about half an inch from the stomach and cut away to a point midway between the first part of the duodenum and splenic end of the stomach. The gastric hepatic was treated in a similar manner, to half way along the lesser curvature; fine catgut was the material used The duodenum was now

clamped in two places and the gut divided between; the forceps on the distal end were covered with rubber; the cut ends were immediately packed around with gauze to prevent infecting the peritoneum; by this means the pyloric end of the stomach could be drawn out of the abdominal cavity. The remaining portions of the gastrohepatic omentum and of the gastro omentum were treated in a similar manner. The esophagus, which was elongated and drawn down, was clamped and divided as had been the duodenum; the stomach was then removed. It was found the duodenum and esophagus could be brought together with a moderate amount of tension. A large-sized

Exterior of stomach; stomach much contracted, due to formalin solution being too strong. 1. Esophageal end, 2. Duodenum.

Murphy button was used to complete the anastamosis, but it was found necessary to use several reinforcing sutures for the anterior two-fifths of the duodeno-esophageal juncture; the material used for this, as likewise the running thread, was silk. The abdomen was closed in the usual way. From the time the man commenced to take the anesthetic till his removal from the table, a period of ninety minutes had elapsed; toward the end he showed a considerable amount of collapse; this continued for four hours, despite hot water bottles, flannels and stimulation by hypodermics of whisky and strychnin. Toward the after-

Interior of stomach, showing growth. 1. Pylorus.

noon he rallied; by 7 P.M., his condition became again alarming, the pulse ran up to 120, weak, compressible and irregular; in fact, he presented all the symptoms of so-called cardiac failure. Enemas of hot coffee, together with hypodermics of whisky and strychnin, were administered without any appreciable effect; hot water was also tried by mouth. Sitting by the patient's bed, feeling the failing pulse, it struck me the condition presented more the phenomena resulting from inhibition of the pneumogastric, and the uncontrolled action of the sympathetic; I therefore administered a hypodermic of 1–100 digitalin. The effect was immediate, the pulse dropping to 110 and steadying. From now on he continued to improve, the digitalin being continued at intervals as required. Urine and feces passed voluntarily at 10:30 P.M. Nutritive enemata were given through the night. The following day he was given half an ounce of peptonized milk and whisky by mouth every hour. Larger amounts by rectum at similar intervals Respiration 30, temperature 101, pulse 102. June 17, pulse 118, respiration 23, temperature 101.2. Nourishment as before. June 18, pulse 106, respiration 18, temperature 100.8. Amount of nourishment doubled, per mouth, but given every two hours, white of egg and beef peptonoids added, enemata as before. June 19, pulse 82, respiration 18, temperature 99; rectal feeding stopped. Chicken broth added, bowels moved. June 20, pulse 80, respiration 18, temperature 98.4; egg-nogg added. June 21, pulse 82, respiration 18, temperature 98.3; given chicken broth thickened with rice flour; corn-starch and wine jelly; bowels moved. June 23, wound dressed first time

Photograph of patient taken twenty-five days after operation.

today; had healed by primary union; about half of the sutures removed; patient hungry, wants beefsteak. July 3, button passed. Given California oysters and minced chicken. Bowels act once daily, evacuations solid. July 10, sat up. From this on patient improved rapidly, gaining strength and flesh. On July 15, he informed a fellow countryman in the ward, he intended going down town to see a friend and do a little shopping; he slipped out of the ward and was discovered by me at 4 P.M., carrying a grip-sack which contained his purchases. He was indignant at my putting him on a car and taking him back to St. Mary's, saying he "felt good" and was "all right." The grip-sack weighed 12 pounds and the man turned the scale at 105 pounds. He then made us understand that his usual weight was 135 pounds, July 21, patient has not started off on any more excursions, but contents himself with playing poker and walking round the hospital grounds. His weight today is 107 pounds.

I have to thank Drs. Frazer, Kingwell, McMonagal

and Bailey for their kind assistance during the operation; also Dr. Keenan, our resident on the third floor, for the great interest and trouble he took in the after-treatment; Sister Mary Carmel for the individual and close attention she gave to the nursing. There is no doubt that I have to thank Dr. Keenan and Sister Mary Carmel for the successful termination of this very interesting and instructive case.

July 28, patient left the hospital and returned home and is feeling well and in every way satisfactory.

SELECTION.

Repulsed by Fever.—It is fortunate that the headlong valor of the American forced the surrender of Santiago. But for the sheer fighting which was won against all odds, the Santiago campaign would now be ending in ignoble failure. The army which Spanish arms could not defeat is repulsed by fever and must come North. The result was foreseen by every one aware of the only conditions under which white men can wage war in the tropics. But countries, like men, never really learn by the experience of others. The English Army has learned how to conduct a campaign in regions like Cuba and in time the United States will. Until we are willing to learn, we shall have the experience of Santiago. White men, the English have learned, can not campaign in the wet season in the tropics in the open unless they have an army of attendants. The English expedition which went to Abyssinia just thirty years ago under Lord Napier of Magdala, had 16,000 English soldiers and 32,000 native attendants to take care of them. All English tropical expeditions are organized after this fashion. Every regiment has its watermen and its tent-men, its carriers and its cooks. A white man in the tropics has a store of cold climate force, vigor, energy and bravery which makes it easy for him to sweep through any tropical fighting line he meets. But he cannot fight the climate. He can not endure rain by day or the damp ground by night. Fresh from the North, for three or four weeks he will endure these things with a glorious disregard of experience. It is as Franklin said, "a dear school; but fools will learn in no other," After three weeks of exposure fever taps the incredulous Northerner on the head and he wakes some morning to find he is too ill to move. As General Ames says: "A full list of the sick would be a copy of the roster of every regiment. The only mercy is that there are only 16,000 men at Santiago who have won a great victory and brought peace instead of 60,000 men about the lines of Havana, lines too strong for assault and needing "regular operations" and weeks of fever-stricken delay. The lesson is clear. For the work of occupying and garrisoning Cuba, the United States must organize an army on the British Anglo-Indian plan. The core of the army must be "immune" whites from the South and negro regiments. No men unacclimated by some experience are ever sent in the British Army to the tropics and men under 25 are excluded altogether from such service. But even regiments thus constituted can not live in the physical conditions usual in campaigning in the temperate zone. The fighting man in the tropics must be taken care of. A force of laborers, all tropical, must be hired. Instead of feeding the idle at Santiago on landing, not an able-bodied man among the natives should have been given a ration unless he was willing to work, and strict military discipline should have ended the fatal and inexcusable nonsense of precious Northern fighting material courting fever and inviting death by digging and pack-carrying when idle Cubans were standing around eating United States rations. If this course had been followed, while fever would have come it would not have demoralized and broken the strength and fighting force of brave men as it has at Santiago and assuredly will at Manila. The prediction is easy to make, it is based on two centuries of Anglo-Indian experience—the instant General Merritt's force moves from its lines and begins active operations in the field, where the men have to get wet, unless they are provided with a plentiful supply of coolies to fetch and carry and spare the white men, tropical fever will mow a broad swath through the strong ranks and a quarter will never come back. These are words of truth and soberness. Every medical man and every man of tropical experience or knowledge knew that the Santiago campaign was a terrible risk. The nation deliberately matched with fever and death for victory and won in the grim game by overmastering bravery. But for white men nothing foils tropical fever except close personal care. If a white man in the tropics has to dig and get wet and do common labor he collapses in all cases and dies in about one-half the instances. The United States has to occupy and, for some time, to garrison Cuba—Porto Rico is higher and healthier. Unless there is to be a terrible waste of life, the Anglo-Indian plan of minutely caring for white men in the tropics must be adopted in Cuba. Any other plan is sure to end like the present collapse at Santiago due to climate, doubtless aggravated by faulty staff administration, but primarily due to climate.—*Press*, Philadelphia, August 5.

The history of the Panama Canal where the French Engineers had plenty of well equipped hospitals, and an abundance of skilled attendants, shows that the fearful sickness roll must be due to inherent conditions of the tropics.

PRACTICAL NOTES.

Inherited Tendency to Hemophilia.—Dr. Sadler, in the *Birmingham Medical Review*, reports a family having marked hemorrhagic tendency in two generations. The father of the family died in 1895 of senile decay; the widowed mother is 60 years of age and in fair health. She has had sixteen children, three of whom died from infantile complaints in the first few days of life. The remainder comprises eight boys and five girls, the eldest of whom (a boy) at the age of 3 years, when apparently in perfect health, fell and bit off the tip of his tongue; the bleeding could not be stopped, and death occurred on the fourth day. The next two sons and their children have not shown any tendency to the diathesis, nor has the fourth son. The fifth son died at the age of three months, from "sunstroke." The sixth son was noticed to become bruised very easily at the time of his first attempts to walk. When he was nearly 7 years of age the cutting of a tooth led to hemorrhage which proved fatal after a week's duration. The seventh son, now aged 12 years, has never bled nor bruised. The eighth boy early developed the tendency to bruise, but it is diminishing year by year. He has had several troublesome attacks of epistaxis. The joint affection of hemophilia first showed itself in him at the age of 3 years. He has had repeated attacks since, and they always begin suddenly in the night. The well-known fact that the girls of the family do not themselves exhibit the hemorrhagic tendency, but that they transmit to their male children, appears in the present instance. Both the first and second daughters have always been perfectly healthy; they are married, and have each had two boys; three of these children are alive and present marked hemorrhagic symptoms. The remaining one died at the age of 3 years from a combination of epistaxis with bleeding from the ears and mouth.—London *Lancet*.

Removal of a Bullet from the Body of the Axis after its Localization by Skiagraphy.—In the *Intercolonial Medical Journal of Australasia*, Dr. E. Bird has published a case of this novel operation, which certainly could never have been carried out without the aid of skiagraphy. The operation was performed more than three months after the injury, at the earnest solicitation of the patient, who suffered a good deal from deep cervical pains on the left side and stiffness of the neck. A three-inch incision was made along the posterior border of the sterno-mastoid muscle in order to gain access to the lateral aspect of the second and third cervical vertebræ. The dissection was continued until the descending fibers of the first bundle of the levator anguli scapulæ were well defined in their upper two inches. The great vessels and nerves were held forward and search made for the bullet. It could be neither seen nor felt, but the transverse process of the axis was in advance of the next. On holding the pharynx forward the dark bullet was seen buried in the body of the axis. Bone had to be snipped away before it could be extracted; recovery followed.

THE
Journal of the American Medical Association
PUBLISHED WEEKLY.

SUBSCRIPTION PRICE, INCLUDING POSTAGE:

Per Annum, in Advance $5.00
Foreign Postage 2.00
Single Copies . . . . . 10 Cents

In requesting change of address, give old as well as new location.

Subscriptions may begin at any time and be sent to

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION
No. 61 Market Street (Occidental Bldgs.), Chicago, Illinois.

MEMBERSHIP IN THE AMERICAN MEDICAL ASSOCIATION.

This is obtainable, at any time, by a member of any State or local Medical Society which is entitled to send delegates to the Association. All that is necessary is for the applicant to write to the Treasurer of the Association, Dr. Henry P. Newman, 100 Washington St., Chicago, Ill., sending him a certificate or statement that the applicant is in good standing in his own Society, signed by the President and Secretary of said Society. Attendance as a delegate at an annual meeting of the Association is not necessary to obtain membership.

On receipt of the subscription the weekly JOURNAL of the Association will be forwarded regularly.

Gentlemen already members of the Association should send their annual subscription to the Treasurer, or direct to the JOURNAL office.

All communications and manuscript of whatever character, intended for publication in the JOURNAL, should be addressed to the *Editor*, and all communications relative to the business of the JOURNAL, proof-sheets returned, or in regard to subscriptions, should be addressed to THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, 61 Market Street (Occidental Buildings), Chicago.

Original communications are only received with the understanding that they are exclusively contributed to this JOURNAL.

SATURDAY, SEPTEMBER 3, 1898.

THE MUSTERING OUT OF THE VOLUNTEERS.

When volunteer troops are to be mustered into the service of the United States, the one point of interest is the physical examination by the medical officer or medical examining board. If the physical condition of the candidate for military service is such as to enable him to pass this examination successfully, the remainder of the process is easily accomplished; but in the mustering out of volunteer troops there is necessarily more of what is usually called red tape by those whose cerebral masses are incompetent to understand the details needful to bring a complicated piece of business to a successful conclusion in the simplest way. The debtor and creditor side of the sheet between each officer and man of a command and the United States Government must have each entry accurately specified, so that when a last payment is made by the paymaster, a balance is effected and the contract between the soldier and the Government is dissolved. Officers responsible for property have to turn it over to designated officers, obtaining in return from the chief of that particular supply department a certificate of non-indebtedness, and enlisted men have to turn over arms and equipments in good condition. The greatest care has to be taken in making up these muster-out rolls. When finished they are submitted to a board of officers who compare their statements with the statements on previous muster rolls, and clothing account-books to ensure their absolute correctness in every respect. The command is then sent to its state or regimental rendezvous to receive its final payments and be mustered out. But here a new and very valuable piece of red tape has been introduced by the recent instructions to mustering officers issued from the office of the Adjutant-General of the Army. This new departure is a piece of wisdom inculcated by the experience of our Bureau of Pensions since the close of the civil war. In the language of the instructions just cited: "To facilitate the settlement of pension claims that may be made on account of disability incurred in the United States service and to protect the rights of persons who may be entitled to the benefits of the pension laws as well as to guard the interests of the Government, it is ordered that a thorough physical examination be made of all officers and enlisted men of volunteers, except general officers and officers of the general staff, immediately prior to their muster-out of service or discharge." Each officer and enlisted man has to sign a declaration as to his physical condition, which is then verified by examination by a medical officer of the regular army whenever the services of such an officer are available, and when not, then by a medical officer of volunteers not belonging to the organization of which the officers and men to be mustered out are members. If any person under examination claims to have a disability of which the medical officer can find no evidence, or to have a disability incurred in the line of duty, whereas the medical officer is of opinion that it was not so incurred, a board of three medical officers will be convened by the Adjutant-General to make a full report on the case, and if the members of the board fail to agree, a separate minority report will be made by the dissenting member. The physical condition of every soldier at the time of his muster-out will thus be a matter of record, and the work of the Pension Bureau in the future will be materially reduced and simplified. Had such an examination been made at the close of the civil war, the list of disabled pensioners would now be much smaller than it is by the exclusion of all those cases in which the evidence was defective and the benefit of the doubt given to the soldier.

THE DUST CONVEYANCE OF TYPHOID FEVER.

The spread of typhoid fever in the various military camps during the present war has become so serious a matter as to call for a most thorough investigation; it certainly was not anticipated and its occurrence will have to be accounted for. It is naturally to be assumed that the camp sites were, for the most part, selected with reasonable care, and with at least the ordinary amount of sanitary precaution usual in such selections, under the oversight and with the consent of the Army Medical Staff. There may have been exceptions, but this certainly should have been the rule. Allowing fully for the careless habits of volunteers, the spread of typhoid seems to have been excessive, and something more than the usual water-

borne contamination would seem necessary to account for it. It is be presupposed that, with the oversight of medical authorities and the generally diffused information in regard to the subject, any direct contamination of the sources of drinking water would have been avoided so far as possible, and if other methods of diffusion of typhoid can be invoked it may simplify the investigation materially, and we look with interest for the report of the very competent board selected by the Surgeon-General.[1]

In a paper read before the British Medical Association, July 30, in its Section on State Medicine, Dr. JOHN ROBERTSON, medical health officer of Sheffield, on "Soil as a Factor in the Spread of Certain Diseases," maintains that, while the water carriage of typhoid infection is important, the attention given to it has obscured the relatively still more important subject of dust- or filth-borne typhoid. He has studied the subject carefully and finds that in over 80 per cent. of urban cases the theory of water or milk infection will not suffice to account for the occurrence of the disease. He finds also that the typhoid fever dies out quickly in grass-covered areas, that when planted beneath the surface it has a tendency to extend upward rather than downward, and that it is capable of living and multiplying in the ordinary surface soil. The transference of the germs from the soil to man is made, he feels assured, under certain conditions, chiefly through the medium of aërially carried dust.

If we consider fully the conditions of some of our military camps, situated in a warm southern climate, where northern grasses can hardly be said to abound, and where such grass-covered areas as existed would soon be trampled out, occupied by inexperienced volunteer troops who naturally are ignorant and reckless as regards sanitary matters, and whose officers have their ideas of control and precaution in these respects yet to be formed, it is not difficult to suppose conditions that will fully account for the typhoid epidemic that has apparently existed. At least this is true if we accept Dr. ROBERTSON's conclusions, and they seem reasonable.

Another point which he makes that is worthy of notice here, is the influence of ground-water, which had been already noticed by VON PETTENKOFER. Dr. ROBERTSON finds that typhoid is more liable to be endemic in regions where the ground-water is near the surface. This, in connection with unsanitary local usages, such as are likely to prevail in camps, might have, it would seem, also an important influence. With a surface soil impregnated with typhoid germs working toward the surface, and with grass wanting or trampled out, we have the most favorable conditions for the aërial transmission of disease, and the winds, which should be a purifying ventilation, may thus become conveyers of pestilence.

In those cases where the camps are supplied from artesian wells, the question of the height of the ground water can be of no possible consequence as regards direct infection by drinking water, but it might still have its influence as regards infection by the medium of dust.

The character of soils in relation to disease is certainly an important subject, and one that has a special significance in a point of view of military sanitation. In an active campaign in respect to fixed posts, where permanent sanitary conditions can be secured, it may be of less importance than in the case of temporary encampments for organization, like those of Chickamauga or Tampa, but in such the attention given it can hardly be overdone. It is a possible thing that some phases of this particular question have been too much overlooked in our recent military operations. In any case, the question of the propagation and carriage of the infection of such diseases as typhoid by the agency of the soil is one that should receive attention.

[1] This board consists of Surgeon Walter Reed, U.S.A., and Surgeons Shakespeare and Victor C. Vaughan, U.S. Volunteers.

THE SEVENTH ARMY CORPS AT JACKSONVILLE, FLORIDA.

At this time when we hear so much of the prevalence of typhoid fever in the camps of our volunteer troops all over the land, it is gratifying to find satisfactory reports coming in from some quarters. The camps at Jacksonville, Fla., are said to be in excellent condition, with few cases of typhoid in the division hospitals, and all these imported cases. The water supply is from artesian wells, 800 to 1000 feet deep. It is saturated when fresh with sulphuretted hydrogen gas, which speedily escapes on exposure to the air. The hospitals are well provided with everything required, and the three division ambulance companies and the reserve ambulance company are thoroughly organized, fully equipped and in good running order. The personnel of the hospital corps consists of 75 medical officers, 75 hospital stewards, 30 acting hospital stewards and 550 privates. Lieutenant-Colonel L. M. MAUS, is Chief Surgeon of this Corps.

RETINAL HEMORRHAGE.

With the passing of the ophthalmoscope from the exclusive use of the oculist, the cases and causes of hemorrhage into the retina have greatly multiplied. The underlying etiologic factors have become of interest to all, regardless of specialism; for the affection may occur in the practice of the surgeon and gynecologist as well as in that of the oculist and the devotee to internal medicine. It may come without warning and indeed without apparent sufficient justification, or cautions in the way of constitutional disease may have existed for years. It is no respecter of age, nor are either of the sexes favored to any

extent; for an increase on the one hand due to obstetric and gynecologic causes is equalized on the other by the greater prevalence of arteriosclerosis and injuries among males. In size it may be barely discernible or may involve the retina in its entirety. There may be but one spot, or the hemorrhages may be so numerous as to leave little more than spaces between them to show that they are separate and distinct. Multiple hemorrhages may involve the periphera alone, may surround the optic disc, or invade the region of the macula lutea. It will be remembered in the anatomy of the retina that the larger vessels lie in the layer of nerve-fibers, while the capillary vessels are contained for the most part in the layer of ganglionic cells and in the inner molecular layer. It follows from this that hemorrhage into the nerve-fiber layer appears superficial (to the ophthalmoscope), large, and as a rule striated, from the peculiar and characteristic course of the vessels in this area. Occasionally the hemorrhage may be so near the surface and in such quantity as to rupture through the internal limiting membrane and involve the vitreous. The age of the hemorrhage influences its color. Fresh hemorrhages are of a deep red in comparison with the rest of the field; when older, evidences of decolorization are present, sometimes irregularly placed, more often around the periphera, forming a complete whitish investment. Rarely the color may be entirely lost, nothing but a white patch remaining. Whitish spots dotted here and there with masses of black pigment are not infrequently the only remnants of an extensive hemorrhage.

Leaving for a time the consideration of trauma in the production of retinal hemorrhage, the remaining cases can be traced to the circulatory system, either the blood itself or the vessels. A most common cause is the rupture of a blood-vessel weakened in some way by disease, either by the formation of miliary aneurysms, as in syphilis, or by the production of arteriosclerosis. The pipe-stem artery, no matter what the cause of its presence, be it Bright's disease, syphilis, chronic lead poisoning, alcoholism or what not, is always a source of danger, and the retina which can offer but slight protection to the vessels contained within its various layers, is often a seat of rupture. Not only in the slow, chronic, interstitial variety does Bright's disease bring about hemorrhage, but in that acute form known as hemorrhagic nephritis hemorrhages may occur. There is one point of difference: in the chronic disease the hemorrhages are superficial and, following the course of the vessels, are striated, forming the well-known "flame-shaped hemorrhages," while in the acute variety the hemorrhagic spots are large and irregular.

Anything preventing the easy exit of blood from the globe, may, by overfilling the vessels behind, cause their rupture, especially if such an obstruction has been of long duration. Thus local diseases of the eye, as tumors, retinitis from whatever cause, glaucoma from whatever cause, myopia of high degree, thrombosis and embolism especially when involving the central artery of the retina, may be the underlying factor, as well as obstructive heart disease, especially mitral, lung disease as chronic interstitial pneumonitis, tumors, or any other cause preventing a free flow of blood through the lungs. While glaucoma itself may act as an exciting cause, it must be confessed that hemorrhage is more apt to follow a sudden diminution in the ivory hardness of the globe; in other words, with the sudden lessening of the intra-ocular tension, as in an iridectomy for glaucoma, the support given the retinal vessels transmitted through the vitreous, is rapidly withdrawn, and rupture of these vessels readily takes place, particularly if arteriosclerotic changes have supervened.

It is, however, in the diseases in which the blood itself has undergone changes that the larger proportion of cases occur. These changes may be hydremic in character or result from the presence of deleterious, poisonous substances, but whatever the cause, the nutrition of the blood-vessels suffers, small areas of fatty degeneration form, and but slight traumatic causes may bring about rupture. Such changes in the nutrition occur in constitutional affections, where fatty degenerative effects are common, diabetes, scurvy, septicemia, pyemia, purpura and in the acute poisonings where several days lapse before the fatal termination, as by phosphorus. The blood diseases proper are complicated by hemorrhage into the retina. It is not too much to say that in a majority of the cases of leukemia and pernicious anemia, retinal hemorrhages will be found, that are usually multiple in these diseases, often large, and as a rule irregular in outline. Chlorosis and the simple anemias may all afford a complication of a similar nature and such cases are not infrequently mistaken for pernicious anemia.

The affection is of interest to the gynecologist in that occasionally in amenorrhea, sudden blindness supervenes about the time of menstruation, were such a function going on; ophthalmoscopic examination reveals retinal hemorrhage without apparent cause. This is then explained as an example of vicarious menstruation, and as in several reported cases of amenorrhea, fresh hemorrhages have occurred with each monthly interval, that explanation is probably correct in obstetric practice, retinal hemorrhages sometimes occur during the pregnancy, without apparent cause, though they are thought to be due to some change in the blood itself. During delivery, efforts at expulsion producing cerebral congestion in a perhaps already weakened vessel, account for not a few cases. New-born infants are especially susceptible to this trouble, but, remarkable to state, complete absorption usually takes place and that without injury to vision. Injury is by no means an uncommon source of retinal hemorrhage. The injury may

involve the globe itself, as in a penetrating stab wound or a blow upon the ball without rupture, or an injury in the neighborhood, as a fracture of the base of the skull may occasion the same result. The operation of iridectomy has this troublesome affection for one of its most dangerous complications, especially when the eye is glaucomatous and the patient well advanced in life. When all, is done and said, however, there still remains a fair proportion of cases in which no cause can be determined, the individual being in apparently perfect health.

CLINICAL TEACHING.

An inevitable change that must come in medical teaching is an extreme predominance of clinical and laboratory teaching over the didactic lecture. The student can learn from lectures by able men, and much is unqestionably impressed upon the student's mind in this way alone, but aside from the practical experience of the lecturer and certain details of application which he can give, the student learns nothing that he can not gain from his text-book on the subject. Furthermore, he loses as a rule a large part of the lecture by attempting to take notes, and no mind possesses the phenomenal ability to remember without notes a detailed series of lectures on a single subject, to say nothing of an attempt to retain lectures on many subjects. At the end of one hour this student has a mass of notes, that are bad, as a rule, and an indefinite idea of the subject. In clinical teaching the professor, again a man of experience in details, is in the presence of an actual case of the disease under description. The disease is presented to the student as he will meet it in practice and his picture must be a more complete and lasting one than any that could be formed from a didactic lecture. The value of clinical methods of teaching would seem an established fact and any argument in favor of it unnecessary, yet it does seem that the faculties of various colleges need to be reminded that their curriculum insists upon attendance at lectures and leaves the clinics to the option of the student. The option regularly results in the cutting of clinics, or it results in his choice of the gynecologic clinic where his erotic desires are stimulated. Furthermore, they need to be reminded that he is required to attend surgical clinics at some large hospital, where he wastes his time by observing an operation he will never perform or by being so far distant that he loses the detail. In any out-patient department there are cases of surgery, medicine, skin diseases, etc., that he may handle, question, diagnose and, what is very important, follow to the termination of their illness. These are the cases that will develop in him a distinctly medical mind and a clinical eye for observation. By far too many students leave college today with the exact means of diagnosis impressed upon them to the exclusion of clinical symptomatology and unless furnished with the facilities for the Widal test are totally incapable of making a diagnosis of typhoid. It seems imperative that such a condition should be changed and the out-patient clinical work be required, if not made predominant, in his course. A satisfactory examination in physical diagnosis and clinical treatment should be as necessary for a degree as a satisfactory paper in medicine or surgery. The college must assume that the majority of its students will enter practice without hospital training and this means that he begins his professional career heavily handicapped by having no clinical pictures of disease, and especially handicapped when it is remembered that in the American perception and memory sight represents four and hearing one.

THE PURIFICATION OF SEWAGE BY BACTERIOLOGIC METHODS.

The London County Council has lately undertaken a study of sewage and its purification by bacteriologic methods. Experiments on the changes in crude London sewage by its filtration through coke are to be conducted at the outfall at Crossness. Pending the construction of the filter and the completion of other arrangements, Dr. A. C. HOUSTON, the bacteriologist who has been assigned by the Council to co-operate in these investigations, has made a careful bacteriologic study of the raw sewage, preparatory to the special inquiry into the changes brought about by the micro-organisms in the filterbeds which are designed for its purification. The results of Dr. HOUSTON'S work have been published by the Council as the first of a series of reports on the "Filtration of Sewage." The work was done in the Public Health Laboratory of St. Bartholomew's Hospital; and thanks are accorded to Dr. KLEIN "for advice and help of the greatest value." Samples were collected in sterilized glass-stoppered bottles, and cultivations were made on the day of collection. Gelatine plates were used in determining the total number of bacteria. The rapid liquefaction of the gelatine produced by the liquefying bacteria in sewage was found to be a decided disadvantage; but with a suitably diluted sewage and with observations made from day to day, it was not difficult to obtain plates with colonies sufficiently advanced in their growth and sufficiently numerous to allow of their being counted with accuracy, even when rapidly liquefying species were present. From 0.1 to 1.0 c.c. of a liquid consisting of crude sewage diluted with 10,000 times its volume of sterile water was used in the cultivations, which were conducted at 20 degrees C. When agar-agar was used the results were too low and the differentiation of species difficult. The number of colonies found in 1 c.c. of sewage varied from half a million to seven million; average about four million. Spores were estimated by adding 1 c.c. of diluted sewage (1:10) to 10 c.c. of melted gelatine in a test tube, heating to 80 degrees C. for ten minutes

d then pouring into a Petri's capsule. The average mber of spores in 1 c.c. of sewage was about 350. quefying bacteria were estimated from the ordinary latine plate supplemented by surface plate cultivaons. The number of these was always found to be ge—about 400,000 per cubic centimeter. It is held at their presence has a bearing on the ability of wage to cause the liquefaction of its own solid or spended matters.

In discussing the search for special micro-organisms e B. enteritidis sporagenes of KLEIN is given promence. A minute quantity of sewage is added to c.c. of freshly prepared sterile milk, contained in a t-tube, which is then heated to 80 degrees C. for n minutes, cultivated anaërobically by BUCHNER'S thod and incubated at 37 degrees C. When B. nteritidis is present the casein is precipitated, the hey remains nearly colorless, and there is a marked velopment of gas. A guinea pig inoculated with c.c. of the whey dies within twenty-four hours with pical enteritic lesions. "If sewage," the report ates, "be regarded as the most frequent and dangers source of the pollution of natural waters, and if, seems to be extremely probable, it is found that the enteritidis is not present in pure waters, it is obous that apart from the pathogenic character of this aërobe, we are here dealing with a bacteriologic thod of detecting contamination with sewage, which cels in delicacy any chemical process known. As e life history of this micro-organism becomes more lly known the bacteriologist may not improbably be a position to condemn a water for drinking purses, by merely considering the results obtained in s examination for this particular organism."

The B. coli communis is found in London sewage in ge numbers, together with many which can be differentiated only by subcultures on a variety of media. he typhoid bacillus was sought for in surface phenol latine, and in potato gelatine plates and the diphria bacillus in ascitic agar plates incubated at 37 grees C.; but the occurrence of these two microganisms in sewage in numbers sufficiently great to ford even a faint hope of their isolation must be an ent so rare that it is probably a waste of time, acrding to Dr. HOUSTON, to specially search for them hen more practical and more immediately useful rk claims attention. In the London sewage protean rms were very abundant, and spores of B. mycoides, subtilis and B. mesentericus were usually present, t Sarcinæ, yeasts and moulds were rare.

The report is handsomely illustrated by plates showg the gross and microscopic appearances of the cro-organisms described. The progress of this inry by the London County Council will be watched th interest by health officers and municipal authorses, in the hope that in its developments an answer y be suggested for the troublesome question, what to be done with our sewage?

THE PENSION PROBLEM.

For years the pension problem has been an embarrassment to the Government, and at the close of the pressnt hostilities the question may assume greater proportions. With the wisdom born of experience, plans of mitigation have already been devised to meet prospective difficulties. Throughout the late Civil War the cry was against "red tape" as being a cunning art of procrastination, and not much time was bestowed upon records. The medical department of the period was supposed to be sufficiently occupied with the sick and wounded in the gross. Persons were classified into cases, and thus this system, although of value as a contribution to medical history, was useless in identifications. Civil work was also neglected, principally on account of items absent from the blanks. Information was not expected and therefore not given. Besides, military activities due to a sudden expansion of the army were in the ascendant, levies of troops increasing in number at each call were more frequent, and the outcome of the war was at the least quite uncertain. Pensions, likewise, were more lavishly promised, and provisions for liquidation of claims were rather on a haphazard scale. As in life, individuals degenerate into records, so in the cases under consideration; what wonder that there should be delays, disorder, frauds and denials of justice? In the language of a war department official "the chief difficulties have been in the obtaining and sifting of testimony after late determinations." For more than thirty years an army of examiners, regular and special, has been maintained at a great outlay, since a government, like a bank secretary, ever pays upon mere sight of the draft. Beyond a doubt a nation's gratitude is desirable to the claimant, but somehow the much-referred-to "unscrupulous attorney" spoils the chances of the worthy and gains but little in the way of a pittance for his easy-going client armed with his flawless affidavit, in too many instances entirely innocent of the fatal element of truth.

We have been assured that our new pension list, according to the most accurate calculations, will closely crowd about 3000, owing to the new warfare and the triumphs of modern surgery. But we are also told that over 600,000 old applications are pending, which include original pensions as well as increases accrued and new disabilities. With all the humane tendencies of the government and all the liberal provisions against disaster, proof of worthiness is a necessity, and the applicant must consume a deal more of time than he expected. The work to be done is practically indexing his own records so that they may lighten the labor of the searchers, in other words, the card system of libraries with duplicates as a provision against accident, the same, as a matter of detail, to be edited by a chaplain or company secretary for the sake of conciseness and smoothness of diction. These hints are given out in substance by the Pension Depart-

ment, which thus far has admirably reconciled the interests of the victim of war with the gratitude of the Republic.

With a little more time the medical and military history may be presented as twin documents. The fact that the Civil War was one of stupendous proportions, and that it drew its fighting material from untrained masses of people, devoted to peaceful pursuits, must constitute a plea for delays and lost identities. Meanwhile, let us remember that the Government more than echoes the sentiment of the people in its love of just and humane methods. Therefore, at the outset of a new epoch, in the face of a dissolving army and navy, let there be more of aid than censure, since the war has been short, and therefore, in every sense economic of life and limb.

CORRESPONDENCE.

The Medical Department of the Army.

WASHINGTON, D. C., August 27, 1898.

To the Editor:—In the JOURNAL of August 20, Wm. Cuthbertson, late Major and Surgeon of the First Illinois Cavalry, gives it as his opinion that the Medical Department of the Army is incompetent and inefficient, and he explains what he considers to be the causes of these alleged conditions and how they are to be remedied. Of all things literary I dislike a newspaper or journal controversy; but my thirty-six years of active service as an army surgeon will not permit me to be silent when I find in the columns of the Journal of our National Association a criticism of Army medical methods by one who, in every line of his published article, shows himself to have been incompetent for the position of regimental surgeon, on the holding of which he evidently bases his claim to criticise. He begins his attack by boldly assailing headquarters. The incompetency and inefficiency which have been apparent to him he considers due primarily to want of rank in the medical corps; that men who are sufficiently endowed by nature with brains and ability to enable them to take an elevated position in the Department will not enter the service when the highest position they can attain is that of Brigadier-General. I need hardly point out to the members of this ASSOCIATION that the man who now occupies this highest position is one who achieved it by virtue of the same brains and ability which made him president of the American Public Health Association and of this, the AMERICAN MEDICAL ASSOCIATION, and gave him a wider than national repute in several fields of medical and sanitary science. The fallacy of this argument of want of rank is shown also by the history of the Medical Department of the Army in the war of the Rebellion. The men who built up the field hospital system of that war, which proved so efficient at Antietam, where it was first put to the practical test, and at all the subsequent battles had no higher rank and no expectation of a higher rank than that of Major. The patriotism of the men of those days led them to serve their country irrespective of questions of rank, and we must say the same of those of the present day, when we see such men as Professor Senn going out as a corps surgeon, and Professor Vaughan as the surgeon of a Michigan regiment.

But to make the Medical Department thoroughly efficient it requires, according to Dr. Cuthbertson, not only higher rank, but to be separate from and independent of all other corps of the army. It so happens, however, that all large armies are necessarily composites; and their efficiency depends upon the drill and discipline which bring about co-operation of action. Artillery is of little account unless it has infantry supports and infantry lines may be rolled up unless covered by cavalry on the flanks, and all are dependent upon the quartermaster's, subsistence, ordnance, medical and other staff departments. It is very well for an ex-surgeon of small experience to settle at his desk how the medical department of an army corps should be managed during the battles of an active campaign; but actual field conditions do not always conform to the notions of theorists. It would be an excellent thing for the Medical Department to be less dependent than it is on the dicta of commanding generals and quartermasters. Where there is responsibility adequate powers should be granted. But this principle applies to the commanding generals as well as to the Medical Department. On his shoulders lies the responsibility for the conduct and success of the campaign. He must therefore have the power. He must not be handicapped in his command by any proviso restricting his movements unless with the permission of the Medical Department. Doctors may know that a certain locality is infected, but if it is necessary for military reasons for troops to hold that locality they must hold it as well against the infection as against the fire of the enemy. If the commanding general concludes for military reasons to make an assault without waiting for his artillery to disembark, the chief of artillery is not blamed for lives lost that would not have been lost had his guns been in a position to rake the enemy. If he concludes that victory will be purchased at a less price if the troops are hurried to the assault without waiting for the hospital supplies to come up, the resulting suffering to the wounded is not to be blamed upon the medical officers. Under such conditions artillery men remain with their guns; but medical officers, instead of remaining with their medical and surgical stores, follow the troops to the field and endeavor to relieve suffering with the materials in their hospital corps pouches and first-aid packets. Had the army chanced to be in a tight place and had those artillery men hurried to the front and done good service with carbines and Colt's revolvers instead of heavy guns, the country would have resounded with the story of their heroism. This is precisely what was done by our medical and hospital corps at Santiago, and I, for one, fail to see incompetency and inefficiency in the noble work which was done by them in the early days and nights of July last. I desire to invite Dr. Cuthbertson's attention to the fact that the Surgeon-General gave the necessary instructions to have all needful articles purchased and that those instructions were carried out in an efficient manner, and yet sufferings were endured at Santiago because the military conditions were such as to render these purchased articles unavailable for use on the field.

To sustain his charges of incompetency and inefficiency on the part of the medical department in general, Dr. Cuthbertson relates his difficulties in obtaining as much castor oil and laudanum as he desired when encamped at Chickamauga Park. Had he inquired closely into the reason for this he would have found that it originated in the effort to lessen transportation and give the largest amount of supplies in the smallest bulk by providing as much as possible the medicaments for the field in tablet form. Again, he could not procure carbolic nor boric acids. The supply table of all armies in the field is necessarily limited. Had he made himself acquainted with the character of the supples provided he would have found plenty of sterilized absorbent cotton, sublimated and iodoform gauze, mercuric chlorid, lime chlorid and trikresol. In fact, Professor Senn is reputed as having testified that even at Santiago there was no lack of antiseptic dressings for the wounded. That which sufficed for Nicholas Senn, when face to face with the surgery of a battle, ought surely to have satisfied a regimental surgeon when dealing with the sore arms of some vaccinated men. At the time Dr. Cuthbertson went to the camp at Chickamauga the supply

partments of the army were confronted with a great labor, providing for a quarter of a million of men suddenly called into the field. Full outfits of medical and surgical chests for regiments and for division hospitals, with ambulances, tents, cots, &c., were shipped off rapidly from the purveying depots so rapidly that transportation companies had difficulty in delivering their freight; and these things had to be made, they were not to be purchased in any drug store or wheelwright's shop. I need say no more of these conditions. They are readily understood by men of intelligence, few of whom will agree with Dr. Cuthbertson, that "if numbers of medical men whom he could name had been placed at the head of affairs, our whole army would have been completely equipped with every medical and surgical necessity they could require in *three days*." Respectfully yours,

CHARLES SMART,
Lieut.-Colonel, Deputy Surgeon-General, U. S. Army.

The "Incompetent and Inefficient" Medical Department of the Army.

NEW YORK, Aug. 27, 1898.

To the Editor:—I have all along sympathized with Surgeon-General Sternberg for the load he has had to bear; but I did not fully appreciate the bearing of his burthen until I read the letter in your issue of August 20, (pp. 421-3). The wail of the "*Late* Major and Surgeon" [*hinc illæ lachrymæ*] recalls the complaint of the governor of a great State that the medical officers of the regiments from that State "could not get their prescriptions filled," who, when confronted with the Army Medical Supply Table, and told that it was the fault of those officers if they lacked anything, said: "Oh, yes, I have seen that, but I would like you to show me lactopeptin on it." "*Lactopeptin!* What would they want with lactopeptin?" "Why," said he, "most of these men have not been accustomed to the coarse army fare and they required lactopeptin to be able to digest it."

Who would not be Surgeon-General of the Army?

Fortunately there is balm in Gilead. Let the Red Cross see that every soldier's "panties" shall have two extra pockets, one for a bottle of lactopeptin and the other for that "splendid little machine," commended by Clara Barton (Feb. 21, 1896), the *Electropoise*; or, perhaps, these pockets had better be put in their pajamas, the lactopeptin to insure the digestion of the "coarse army fare," and the Electropoise, "that incalculable blessing," which has "power to put a person to sleep and *keep him asleep* until satisfied Nature awakes refreshed," to protect him against night alarms.

About six weeks ago some charitably-disposed ladies offered a naval purveying officer an unlimited supply of catnip for the sailors in the navy. Why should not catnip be equally serviceable to soldiers? If every one in the United States will only suggest what he or she thinks ought to be added to the Army Medical Supply Table, the Medical Department of the Army may in time become not quite so "incompetent and inefficient." The Association of Military Surgeons of the United States might profitably consider this matter at its *post-bellum* meeting.

A. L. G.

The Association and the Colleges.

TRENTON, TENN., Aug. 22, 1898.

To the Editor:—After carefully reading the notice sent out by Dr. W. B. Atkinson, Permanent Secretary, to the deans of the various Medical Colleges in the United States, setting forth the action of the AMERICAN MEDICAL ASSOCIATION, at Denver, in June last, in which it was voted "to allow no one to register as either delegate or permanent member of this ASSOCIATION," who, as "professor or other teacher in, or graduate of any Medical College in the United States, which shall, after Jan. 1, 1899, confer the degree of Doctor of Medicine, or receive such degree on any condition below the published standard of the Association of American Medical Colleges," I am satisfied that the ASSOCIATION has attempted to reach a point which it should attain, in an unconstitutional manner. This resolution attempts to define who shall be received hereafter as members of this ASSOCIATION, and in doing this certainly is amending section 2 of our Constitution, which clearly defines the membership of the AMERICAN MEDICAL ASSOCIATION, and as such should be laid over for one year. (See section 7, page 9 of Constitution.) Had this point of order been made against the resolution at the time it was offered, as the presiding officer of the ASSOCIATION on that day, I would have decided the point well taken, and have ruled it out of order.

It is a point of law that any action improperly taken, unlawfully passed, is not binding. Hence, it seems to me, that to make such action binding, the matter must be presented in the form of an amendment, lie over one year, and then be acted on. This matter is one of too much importance to the ASSOCIATION to be rushed through in the hurry of business with the assurance from the Secretary of Business Committee that one member of the Southern Medical College Association assured him that they were all ready to abide by the action of the ASSOCIATION.

I dislike to call attention to this matter, but being connected with no college, I feel that I can do so without being charged with selfish motives. The Southern Colleges had, many of them, sent out their catalogues setting forth a three years' course of study, and now for the ASSOCIATION to say to them that "neither you nor any of your graduates for 1899 can be received as members of the ASSOCIATION," is unjust. Some of these professors are live, active members of our ASSOCIATION. As already stated, this action of the ASSOCIATION can not bind any one, having been illegally taken; hence, the Registration Committee should be notified to proceed at Columbus under the old law.

Yours truly, T. J. HAPPEL, Ex-Vice-President.

A Handy Way to Clean Tubes.

ELGIN, ILL., Aug. 23, 1898.

To the Editor:—Being interested in the use of the hematocrit and the hematocytometer, I wish to mention a few matters of technique which I have followed that have facilitated the the use of these instruments.

The hematocrit percentage tubes are usually accompanied with a dropper and rubber tube connection, presumably to be used for filling and cleaning them. It will be found difficult to fill a percentage tube by the use of the dropper from one drop of blood without admitting air at the same time. If the tube is perfectly clean it can be much more easily filled by placing its point in the drop of blood and allowing it to fill by capillary attraction, but the success of the procedure depends on the cleanliness of the tube. The slightest coating of fibrin in the tube prevents it from filling, but if absolute cleanliness is observed, one will experience no difficulty.

To clean the tube perfectly has been a problem which demands attention. After using a tube there will be found a deposit of fibrin which can scarcely be removed by simple washing in water, alcohol and ether. A fine cambric needle armed with a strand of mending cotton can be used to wipe the inner surface of the tube, preferably after the tube has been thoroughly dried.

To dry the percentage tubes of the hematocrit and the measuring tube of the hematocytometer, the use of an ordinary bicycle-pump will be found very satisfactory.

Possibly these simple procedures may have been adopted by others, but if mentioned in any of the current literature such mention has escaped my notice. Very respectfully,

F. H. JENKS, M.D.

Malingering.

WASHINGTON, D. C., Aug. 24, 1898.

To the Editor:—Apropos of the communication on "Malingering" (p. 423, August 20), suits for alleged malpractice are indeed to be deprecated, and it behooves the profession everywhere to stand together in resisting the attacks of the ignorant and the malicious, whether they be directly from the laity or, as is so often the case, inspired by more or less unprincipled and over-zealous "shysters" of the legal profession. On the other hand, when, as in the case cited, the medical practitioner adopts such questionable methods, does he not but reap the penalty of his folly? That a physician should consent "nearly every day, to make some kind of an application to the uterus" of a pronouncedly hysteric woman of neurotic history, "more to satisfy her than for any good it did," is of the very essence of charlatanry. There seems to have been no question as to the diagnosis; the symptoms noted would be most natural under the conditions described. The daily diddling, under the guise of legitimate operative procedure, could accomplish nothing but an aggravation of the patient's erethism, pampering to her depraved sensibilities. Of course, the patient is strong, robust, healthy, and active," "since he quit" practicing such instrumental masturbation! Such treatment, or rather such abuse of the perverted sexual instinct of a hysteric, smacks of ignorance born of laziness, if no worse; but, by the defendant's own admission, he deliberately set about to deceive his patient, "to satisfy her intense desire that he should use powerful remedies to kill her cancer," which he knew she had not. Surely, the "reputable firm of lawyers' could find no better brief to submit in behalf of their client than this outrageous confession. Faithfully yours,

MURRAY GALT MOTTER, M.D.

ASSOCIATION NEWS.

Some Suggestions Regarding the American Medical Association.—The large number of physicians attending the annual convention of the American Medical Association are certainly entitled to individual consideration. It is, therefore, proper for the benefit of the scientific sections to have only those papers read which are practical and which can bring out good discussions, or those based upon practical research and investigation. There can be no question that either there is mismanagement in some Sections or that special favoritism is bestowed on a few influential friends. Our attention is, however, directed to an abuse which calls for an executive investigation, viz.: That certain men send titles of papers to several sections—in some instances they announce papers in three different sections, in most instances merely to see their names in print or else to see how often they can find their names printed in a single program. In one instance a gentleman was given preference on the program and other papers postponed to enable this bright individual to wander from section to section and give "scientific" orations and expound new ideas, based on experience of long standing. This is radically wrong. While there can be no objection to discussing papers of especial interest in the various sections, especially so if invited to participate, we feel that it is radically wrong to permit some men to monopolize various sections and crowd equally prominent men. It can only add to the dignity and scientific value of each particular section if each paper, or rather if the abstract was carefully scrutinized and eliminated if not found desirable. This would not only encourage good work, but would stimulate those men who boast that anything is good enough for the American Medical Association.—*Medical Times and Register*, August 13.

SOCIETY NEWS.

Tennessee Health Officers' Association.—This body held a three days' session at Nashville, Tenn., ending August 16. In the election of officers, Dr. W. S. Nash of Knoxville, was re-elected president and other officers chosen as follows: First vice-president, Heber Jones of Memphis; second vice-president, Charles E. Lones of Knoxville; third vice-president, Larkin Smith of Nashville; secretary, H. C. Chance of Tazewell; advisor and superintendent of the veterinary division of the association, H. D. Fenimore of Knoxville.

Canadian Medical Association.—At the twenty-first annual meeting of this Association, held at Montreal, August 18, 19 and 20, the following officers were elected: President, Dr. Irving H. Cameron, Toronto; vice-presidents, Prince Edward Island, Dr. J. McLeod, Charlottetown; Nova Scotia, Dr. Kirkpatrick, Halifax; New Brunswick, Dr. L. N. Bourque, Moncton; Quebec, Dr. Jas. Bell, Montreal; Ontario, Dr. J. A. Williams, Ingersoll; Manitoba, Dr. R. S. Thompson, Deloraine; Northwest Territories, Dr. Lindsay, Calgary; British Columbia, Dr. P. J. Tunstall, Vancouver; general secretary, Dr. F. N. G. Starr, Toronto; treasurer, Dr. H. B. Small, Ottawa; publishing committee, Drs. A. D. Blackader, J. L. Dawson, W. W. Young and the general secretary and treasurer; by-laws, E. C. Parne, Wyatt Johnston, Jas. Bell, E. R. Dickson, G. S. Ryan, W. W. Dickson, M. Beausoleil and the president and secretary.

Health Officers and Sanitarians in Illinois are invited to the next meeting of the Auxiliary Sanitary Association of the Illinois State Board of Health, which will be held in the Capitol Building at Springfield on Sept. 26 and 27, 1898. The object of this meeting is to discuss matters of interest to those engaged in sanitary work, such as the prevention and restriction of communicable diseases, the regulation of systems of sewerage and public water-supplies, the drainage and sewerage of villages, the legislation necessary to promote sanitation throughout the State, etc., and to establish close relationship between the State Board and local officials. A program of the papers to be read will be sent to any who make request, by the Secretary, who will also gladly answer any inquiries. The Illinois State Fair will be held at Springfield, September 26 to October 1. Those who attend the convention will have an opportunity to also visit the Fair on the days when the most attractive programs will be presented, and the railroads have agreed to sell tickets to all attending the Fair at one fare for the round trip from any point in the State. J. A. Egan, M.D., Secretary Illinois State Board of Health, Springfield.

Association of American Medical Colleges.—Decision of the Judicial Council, denying the right of the Medico-Chirurgical College of Philadelphia to resign its membership:

The Council decides that the Medico-Chirurgical College of Philadelphia is now, and has been continuously since 1891, a member of the Association of American Medical Colleges, in full fellowship. It signed the Constitution and By-Laws and participated in each annual meeting, including that of 1898, thereby assuming the obligation of honor to maintain and observe all the provisions of the constitution.

Article III, Section 3 of the Constitution, which the said Medico-Chirurgical College voluntarily pledged to observe, says: "Candidates for the degree of Doctor of Medicine in the year 1899 and thereafter, shall have attended at least four courses of medical instruction, each course of at least six months' duration, no two courses of which shall have been in the same calendar year."

Section 6, Article III, prescribes the conditions on which credits for one year of time, in the four courses may be extended to certain persons whose claims for exemption are clearly defined.

Section 7, Article III, states that; "Members of this Association may confer the degree of Doctor of Medicine, during the year 1898, upon students who have attended three courses of six months' duration each; each course shall have been in a separate calendar year."

The Judicial Council of the Association of American Medical Colleges has repeatedly decided that the constitutional requirement of four courses in 1899 and thereafter must be construed to begin Jan. 1, 1899, and these decisions have been unanimously adopted by the aid of the votes of the said Medico-

hirurgical College participating in the general sessions of the ssociation. It is impossible that the said Medico-Chirurgical ollege, an institution of high character, could have promised y student to descend from the scale of honor, and to hold wn the standard below the requirements it solemnly pledged bserve in 1899 and thereafter.

The AMERICAN MEDICAL ASSOCIATION, at Detroit, June, 1892, nanimously demanded of all the colleges in the United States e adoption and observance of a standard of requirement for e degree of Doctor of Medicine, which should in no manner l below the minimum standards of the Association of Amer- an Medical Colleges. At Denver, on June 9, 1898, the AMER- AN MEDICAL ASSOCIATION unanimously resolved to hereafter ny the right of membership to any professor or other teacher any medical college which confers the degree of Doctor of edicine on conditions below the published standards of the ssociation of American Medical Colleges after Jan. 1, 1895. hose receiving the degree on such conditions are likewise arred. It is clear, therefore, that the College Association ust maintain its own published requirements, as these are onditions which shall determine the qualifications of member- ip in the AMERICAN MEDICAL ASSOCIATION. The Association American Medical Colleges can not concede to any one of its embers the privilege of resigning to fulfill a pledge made as breach of faith.

It is the judgment of the Council that the resignation of the ollege can not be accepted, and that the presence of Professor aPlace as the authorized delegate, and Professor Shoemaker an associate, and their participation in the general sessions the Association of June 6, 1898, directly contradict the atements of Dean Egbert in his letter of resignation.

(Signed by) DUDLEY S. REYNOLDS,
STARLING LOVING,
JAMES H. ETHERIDGE,
ALBERT R. BAKER,
RANDOLPH WINSLOW,
VICTOR C. VAUGHAN, absent in Cuba;
JOHN B. ROBERTS, failed to report.

Mississippi Valley Medical Association.—The following is the eliminary program for the meeting at Nashville, October 1-14, 1898:

Why I have Abandoned the General Practice of Vaginal ysterectomy. B. Sherwood-Dunn, Boston, Mass.

Tonsillitis or Quinsy, Causes and Treatment. J. A. Stucky, exington, Ky.

Pichi. H. W. Whitaker, Columbus, Ohio.

A Few Practical Points in the Treatment of Posterior rethritis. A. Ravogli, Cincinnati, Ohio.

The Neuro-Hypothesis of Rheumatoid Arthritis. Frank arsons Norbury, Jacksonville, Ill.

Diphtheria and its Logical Treatment. A. M. Osness, Day- n, Ohio.

Varicocele. F. E. Kelly, LeMoille, Ill.

A Plea for Pelvic Peritonitis and Cellulitis. F. F. Bryan. eorgetown, Ky.

Syphilis. John M. Batten, Pittsburg, Pa.

Gonangeiectomy and Orchidectomy for Hypertrophied Pros- ate in Old Men. Geo. W. Johnson, Dunning, Ill.

Wounds of the Lachrymal Apparatus, Report of Operation r Restoration of Caniliculi Obliterated by Traumatism. eo. F. Keiper, Lafayette, Ind.

A Consideration of the Limit to Operative Gynecology. helby C. Carson, Greenboro, Alabama.

The Relations of the Gynecologist and the Neurologist. W. H. Humiston, Cleveland, Ohio.

Intermingling and Changing of Type in Diseases. W. Gas- n McFadden, Shelbyville, Ind.

Mercury and Its Action. William F. Barclay, Pittsburg, Pa.

The Diagnosis of Gonorrhea in Women. J. Riley Eastman, dianapolis, Ind.

Sub-Periosteal Removal of Caries from the Pelvic Basin, with e Report of Cases. S. E. Milliken, Dallas, Texas.

Complete Inspection of the Rectum by Means of Newer echanical Appliances. Thos. Chas. Martin, Cleveland, Ohio.

Hydrotherapy in Stomach Diseases. Geo. D. Kahlo, dianapolis, Ind.

Surgical Treatment of Infantile Paralysis. Alex. C. Wiener, hicago.

Suprapubic Cystotomy vs. Perineal Section. James M. M. arrot, Kingston, N. C.

Report of Cases in Obstetrics with Complications. R. C. att, McKenzie, Tenn.

How Should We Treat Typhoid Fever? T. Virgil Hubbard, tlanta, Ga.

Interesting Surgical Cases. M. Goltman, Memphis, Tenn.

The Relationship between the Genito-urinary Tract and Rectum, with Special Reference to the Female. John L. Jelks, Memphis, Tenn.

A Clinical Contribution to Ectopic Gestation. W. W. Taylor, Memphis, Tenn.

The Bicycle from the Medical Standpoint. I. N. Love, St. Louis.

Surgical Treatment of Pus in the Pelvis. Jos. Price, Philadelphia, Pa.

Operations on the Mastoid, When and How Performed. Andrew Timberman, Columbus, Ohio.

Arthritic Diathesis. R. A. Bate, Louisville.

Diagnostic and Therapeutic Uses of Tuberculin. Chas. W. Aitken, Flemingsburg, Ky.

Some Pathologic Conditions of the Ovaries and Adnexa Causing Pain. G. W. Halley, Kansas City, Mo.

American Association of Obstetricians and Gynecologists.—This Association will hold its eleventh annual meeting at Pittsburg, Pa., Sept. 20, 21 and 22, 1898. The following program is announced:

President's Address, Charles A. L. Reed, Cincinnati.

Septic Infection of Ovarian Cystoma, Charles Greene Cumston, Boston.

Recent Experiences with the Alexander Operation, H. E. Hayd, Buffalo.

Nursing in Abdominal Surgery, Joseph Price, Philadelphia.

Carcinoma of the Breast, W. F. Westmoreland, Atlanta.

Operative Technique for Intraligamentous Ovarian Cystoma, D. Tod Gilliam, Columbus.

Organization of Major Operations in Private Practice, W. G. Macdonald, Albany.

Explanation of the Character of the Temperature in Appendicitis, Robert T. Morris, New York.

Pathologic and Clinical Phases of Gall-Stone, A. H. Cordier, Kansas City.

Some Facts in Regard to Uterine Fibroids, H. D. Ingraham, Buffalo.

Albuminuria Complicating Gynecologic Operations, Rufus B. Hall, Cincinnati.

Extrauterine Pregnancy with Specimen; Mature Fetus Borne Twelve Years, W. J. Asdale, Pittsburg.

Surgical Treatment of Morbid Conditions Involving the Broad Ligaments, A. P. Clarke, Cambridge.

Paper by Walter B. Dorsett, St. Louis.

A Second Paper on the Surgical Treatment of Intussusception in Infants, with Cases, H. Howitt, Guelph, Ont.

Relation of Nervous Affections to Diseases of Female Pelvic Organs, B. Sherwood Dunn, Boston.

Ureteral Anastomosis, Geo. H. Noble, Atlanta.

The Graver Forms of Nerve Disturbance due to Organic Changes in the Genital Organs, W. H. Humiston, Cleveland.

Some of the Complications Following Vaginal Hystero-Salpingo-oöphorectomy in Pelvic Suppuration, F. Blume, Allegheny.

The Question of Intra-abdominal Drainage, Edwin Walker, Evansville.

Report of a Case of Double Uterus and Vagina with Pregnancy in one Horn; Excision of Vaginal Septum, F. Blume, Pittsburg.

Some Clinical Observations, Based on Over 100 Abdominal Sections for Ovariotomy, X. O. Werder, Pittsburg.

Remarks on Methods of Hemostasis, with Demonstration, Walter B. Chase, Brooklyn.

Past and Present Surgery of the Gall-bladder and Bile-ducts, William H. Myers, Fort Wayne.

Treatment of Granular Erosion of the Cervix by Ligature of the Cervical Vessels, D. Tod Gilliam, Columbus.

Relation of Rectal to Pelvic Disease and to Nervous Disorders in Women, Joseph M. Mathews, Louisville.

Treatment of Endometritis, William A. B. Sellman, Baltimore.

Tubercular Peritonitis, J. B. Murphy, Chicago.

BOOK NOTICES.

Diseases of Women: A Treatise on the Principles and Practice of Gynecology for Students and Practitioners. By E. C. DUDLEY, M.D. Octavo, pp. 637. Philadelphia and New York: Lee Bros. & Co. 1898.

Professor Dudley's work is the result of long years of study and observation and this fact must carry with it a certain

authority. The book fairly covers the field of gynecology, and is divided into five parts. Part I is given to the general principles of gynecology, such as psychologic periods in the life of women, aseptic and antiseptic diagnosis, local treatment, major and minor operations, drainage and after treatment, relations of dress; Part II is given to inflammations of the female generative organs, including the pelvic passage; Part III to tumors, tubal pregnancy and malformation; Part IV discusses traumatisms, both nonpuerperal and puerperal, and Part V displacement of the uterus and other pelvic organs.

The teachings of the author are sound and conservative; the illustrations are clear, many of them original, and the book as a whole constitutes a valuable contribution to the subject. The author's personal contributions to gyneclogic literature have been extensive, and the resulting work may be taken as a finished product of his life experience.

History of Yellow Fever; Indispensable Facts Pertaining to Its Origin and Cause, and Its Present Artificially Acquired Habitat, with Reasons Going to Show the Possibility of Its Complete Extinction from the Globe; Its Nature, Anatomic Characteristics, Symptoms, Course and Treatment, with an Addendum on its Twin Sister, Dengue, containing a Parallel Table of the Most Prominent Symptoms of each Disease. By W. L. COLEMAN, M.D. Pp. 141. Houston, Texas.

This book comprises the results of forty years' active work in the South and personal experience in passing through several epidemics of yellow fever. It is pleasantly written, and many of us will notice with pleasure the frequent reference to names of well-known epidemiologists. The anecdotes in the book are well told, and whether or not one agrees with the optimistic views of the writer in regard to the prevention and ultimate extinction of the disease, he will at least derive pleasure from a perusal of the book.

A Guide to the Clinical Examination of the Blood for Diagnostic Purposes. By RICHARD C. CABOT, M.D. With colored plates and engravings. Third revised edition. Pp. 452. Octavo. New York: William Wood & Co., 1898. Price, in cloth, $3.25.

We have heretofore mentioned in terms of praise the appearance of successive editions of this estimable volume. The present edition has had about forty pages of new matter added, in which is an account of Professor Oliver's tintometer and hemoglobinometer, new matter on the primary anemias and on leukemias, also a description of Muller's "blood dust," new observations on poisoning by alcohol, opium, corrosives and ptomains, on aneurysms, on paroxysmal hemoglobinemia and on cretinism. The general plan of the book remains the same as heretofore. It is indispensable for practitioners who desire to keep abreast of the newer methods of clinical diagnosis, and is wholly a credit to American medical literature.

Laboratory Work in Physiological Chemistry. By FREDERICK G. NOVY, Sc.D., M.D. Second edition, revised and enlarged. Pp. 326. Ann Arbor: George Wahr, 1898.

This edition is, as stated on the title page, enlarged and revised, so much so as to almost constitute a new book. Every medical student should receive laboratory instruction, and this work will be indispensable in the examination of food stuffs and the fluids and secretions of the body. Indeed, modern physiology requires so much experimental work for its proper understanding that the intelligent reading of a modern text-book is scarcely possible unless one keeps posted in the operations of the laboratory.

Transactions of Forty-eighth Annual Meeting, with Constitution and By-Laws, of the Illinois State Medical Society, held in Galesburg, May 17, 18 and 19, 1898. Pp. 530. Ottawa Free Trading Printing house, 1898.

This volume contains, besides a record of the proceedings, the addresses and papers read before the Society, list of officers, place of meeting, list of members, officers of sections and committees. The Secretary is to be congratulated upon the early appearance of the transactions, the careful editing and excellent makeup. We regret that the speeches at the annual dinner were not reported, but otherwise there is lit[tle] room for criticism. The papers are generally excellent a[nd] show a high grade of work.

The Sanitary Institutions of the Imperial Government of Ja[pan]. Paper. Pp. 103. Published by the Central Sanitary Bur[eau] of the Home Department, Yokohoma, 1898.

The five parts of this volume deal respectively with: "[The] Organization of the Sanitary Institutions," "Institutions [relating] to the prevention of Infectious Diseases," "Institutions [for] Vaccination," "Public Health Institutions," and "Medi[cal] Institutions." The arrangement and classification of t[he] topics under these several heads is clear and the various ch[ap]ters contain much information as to the sanitary institutio[ns] of Japan.

Proceedings of the Association of American Anatomists. Pa[per]. Illustrated. Pp. 142. Washington, D. C. 1898.

This volume contains the proceedings of the tenth ann[ual] session of this Association held at Cornell University, Ithac[a], N. Y., Dec. 28-30, 1897, and an appendix containing a list [of] members. It also contains the Constitution, officers for 18[97-]98, a report on anatomic nomenclature, and various pape[rs] and discussions.

PAMPHLETS RECEIVED.

Bronchial Carcinoma; The Question of Operative Interference. Recent, Simple Fractures of the Patella. By Charles A. Powers, Den[ver], Colo. Reprints.

Calculous Disease and the Treatment best Adapted for its Prevent[ion]. By H. Foster Hazlett, Pueblo, Colo. Reprinted from Therap. Gaz.

Carcinoma of the Stomach, Retrogressive Lymphatic Transport, o[f]. By W. C. F. Witte, Milwaukee, Wis. Reprinted from Phila Med Jour.

Catalogue of Law, Medical and Dental Departments of the Nation[al] University, Washington, D. C.

Cataract Operations. By L. Webster Fox, Philadelphia, Pa. Reprint[ed] from International Clinics.

Colorado College of Dental Surgery, Third Annual Announcement. Den[ver], Colo.

Curvature of the Neck of the Femur, Sometimes Called "Coxa Var[a]." By Charles H. Frazier, Philadelphia, Pa. Reprinted from Annals [of] Surg.

Disease as Described in Literature. By Cephas L. Bard, Ventura, C[al.] Reprinted from Pacific Med. Jour.

Diseases of the Eye Caused by Diseases of the Nose. By Allen [J.] Haight, Chicago, Ill. Reprinted from Jour. Am. Med. Ass'n.

Georgetown University School of Medicine: Circular of Informat[ion]. Washington, D. C.

Influence of Antitoxin in Treatment of Laryngeal Diphtheria with [and] without Intubation. By Edwin Rosenthal, Philadelphia, Pa. Reprint[ed] from Md. Med. Jour.

John A. Creighton Medical College Announcement. Omaha, Neb.

Johns Hopkins Medical School, Baltimore, Md. Sixth Annual An[-] nouncement.

Kephir. By C. D. Spivak, Denver, Colo. Reprinted from N. Y. Me[d.] Jour.

Kryofine. By John H. Curtis, Chicago. Reprinted from Therap. Gaz.

Medico-legal Significance of the Physical and Mental Examination [of] Railway Employes. By Granville P. Conn, Concord, N. H. Reprint[ed] from Railway Surgeon.

New York Post-Graduate Medical School and Hospital. Announce[-] ment. New York City.

Physical Characteristics of 10,000 Men. By Lieut.-Col. Charles Ada[ms], Chicago, Ill. Reprinted from Med. Standard.

Precocious Cerebral Syphilis. By W. F. Wegge, Milwaukee, Wis. [Re-] printed from Trans. of the State Med. Soc., 1898.

President's Address before Med. Soc. of Pennsylvania. By W. Mur[ray] Weidman, Reading, Pa. Reprinted from Penn. Med. Jour.

Remarks at the Presentation of the Candidates for the Degree of M[.D.] at the Commencement of the Johns Hopkins University, June 14, 18[98]. By William H. Welch, Baltimore, Md. Reprinted from Johns Hopk[ins] Hosp. Bul.

Renal Calculus; The Diagnostic Importance of Fever in Late Syphil[is]. The Essential of the Art of Medicine. By J. H. Musser, Philadelph[ia], Pa. Reprints.

Sanitarium Treatment of Pulmonary Tubercu'osis. By J. Edward Sw[ift]. bert, Liberty, N. Y. Reprinted from N. Y. Med. Jour.

Sectarianism in the Medical Profession. By G. W. Brooke, Ellswo[rth], Ohio. Reprinted from Cleveland Jour. of Med.

Some Results of the Administration of Thyroid Extract on the Cor[-] cles and Hemoglobin in Anemia Associated with Melancholia. By S[a]- uel Bell, Newberry, Mich. Reprinted from Physician and Surgeon.

Souvenir Magazine, Ann Arbor, Mich.

State Control in Medicine. By J. W. Pettit, Ottawa, Ill.

Tuberculin Test in Cervical Adenitis. By Edward O. Otis, Boston, Ma[ss.] Reprinted from Med. News.

University of Colorado, Summer Bulletin. Boulder, Colo.

University of Oregon, Medical Department. Annual Announcem[ent.] Portland, Ore.

Western Reserve University Announcement. Cleveland, Ohio.

TRADE PAMPHLETS.

Illustrated Catalogue of Orthopedic Apparatus. W. F. Ford & C[o.] New York City.

Jewell Water Still, The. O. H. Jewell Filter Co., Chicago.

Lactopeptine Desk Calendar. New York Pharmacal Association, N[ew] York City.

Palmyra Springs Sanitarium. Dr. L. H. Prince, Palmyra, Wis.

Price List of Bayer's Pharmaceutic Products. Forbenfabriken of E[l]- berfeld Co., New York City.

Price List of H. K. Mulford & Co., Philadelphia.

Red Cross Notes. Johnson & Johnson, New Brunswick, N. J.
Steuben Sanitarium, The. Dr. J. E. Walker, Hornellsville, N. Y.
Surgeons-General of the U. S. Navy. Series I. Maltine Company, New York City.
The Glen Springs, Watkins Glen, N. Y.
The Ship's Doctor. Arlington Chemical Co., Yonkers, N. Y.
Ypsilanti Mineral Bath House. Ypsilanti Mineral Bath Co., Ypsilanti, Mich.

NECROLOGY.

Francis Walton Todd, M.D., was born at Bardstown, Ky., April 17, 1816, and was educated at Illinois College, Jacksonville, Ill. In March, 1838, he was graduated in medicine at Cincinnati College under the tutelage of Drs. Drake, Willard Parker, Fash McDowell and Samuel D. Gross, and in 1839 he went to Port Gibson, Miss., where he practiced his profession until February, 1847, when he joined the army of General Scott as an assistant-surgeon, and made the campaign to the city of Mexico. After the close of the war he resided in New Orleans until the spring of 1849, when he went to Panama, and was employed by the chief engineer superintendent of the railroad, then building, to take care of his sick, which he did until the steamer *Panama* came around from New York, on which vessel he went to California, arriving at San Francisco June 4, 1849. For several years he resided at Todd's Valley, Placer County, and to the practice of medicine he added horticulture and viticulture in which he was successful, but the mines having become exhausted, and the population gone to other pursuits, together with his remoteness from market he gave away property that had cost him a large sum and removed to Stockton, where he gave twenty years to medicine, except three years spent in Europe. During this time he held, for several years, the office of member of the first State Board of Health, was a delegate to the International Congress in 1876 at Philadelphia, was one year the secretary, three years a vice-president, and one year president of the State Medical Society of California, president of the Board of Health of Stockton, for two years president of the San Joaquin Society of California Pioneers, and as long as the Society existed was secretary of the San Joaquin County Medical Society. Retiring at the age of 72 years, from a laborious practice, he sought ease in retirement at Coronado, Los Angeles, and other resorts. Dr. Todd was a mason and knight templar and died at Capitola, Cal., Aug. 5, 1898, strong in the faith of the Christian religion.

Lawrence S. Smith, M.D., major and surgeon of the First Regiment Penn. Vol. Infantry, died at sea, on the hospital ship *Relief*, August 17, of typhoid fever. Major Smith was 32 years old, and since 1894 has been in general medical practice at 1233 South Eighteenth Street, Philadelphia, Pa., devoting special attention to gynecology. He was educated at the Cheltenham Military Academy, subsequently entering successively the College and Medical Departments of the University of Pennsylvania, from which he graduated in 1891, then serving eighteen months as resident physician, the time being divided between the Pennsylvania Hospital and the University Hospital. From the latter he went to Germany, and studied at Goëttingen for two years, At the outbreak of the war with Spain he was surgeon major of the First Regiment, and was mustered into service with that command at Mt. Gretna. While at Chickamauga he was ordered to Newport News, to accompany the Porto Rican expedition as surgeon of the First Army Corps, and contracted typhoid fever at Ponce.

John F. Morse, M.D.—On August 23 San Francisco witnessed the funeral of one of her ablest surgeons, John F. Morse. He was a native Californian, graduated from the old Medical College of the Pacific in November, 1878, and had practiced surgery in San Francisco almost continuously since that time. For some years he was connected with what was then known as the Morse Clinic of the Cooper Medical College, the clinic having been established by his father. A few years ago there arose a difference of opinion between Dr. Levi C. Lane, who controls the Cooper Medical College, and Dr. Morse, which resulted in Dr. Morse severing his connection with the clinic. Dr. Lane thereupon changed the name of the clinic from the "Morse Clinic" to the "Cooper College Clinic." Dr. Morse shortly afterward was appointed chief surgeon to the German Hospital, which position he filled with eminent satisfaction up to the time of his death. He was an intense student, a brilliant, clever and capable operator, a hard worker, and a man of sterling honesty. No surgical proceeding or possibility, which offered the slightest prospect of relief for his patient, was too difficult or appalling for his deft fingers or his clear, cool thinking. He was a member of a number of lodges and societies, and at the time of his death an active member of the Board of Health of San Francisco. The funeral was held under the combined auspices of those various organizations. Though his home and his work were in San Francisco, his name and his fame were confined to no City and no State in our country, nor to our country alone. He died after an illness of about ten days, from cerebral hemorrhage following a collapse from overwork. His life was a living illustration of the three factors which should actuate every physician: Honesty, thoroughness, and persistent, indefatigable application.

John S. Griffin, M.D., a pioneer physician and a public-spirited citizen, who founded East Los Angeles, and whose sheep once roamed in thousands over his ranches in San Pasqual, now Pasadena, died at Los Angeles, Cal., August 24, aged 82 years. Through the history of Southern California for the past half-century runs the thread of his life. He received his medical education at the University of Philadelphia, and practiced several years in Louisville, Ky., being appointed assistant-surgeon in the army in 1840. After service in Florida, he was with General Kearney in 1846, when he entered Santa Fé at the outbreak of the Mexican War, going to San Diego, Cal., Dec. 10, 1846.

Joshua P. Arthur, M.D., Laredo, Texas, August 19, aged 58 years.——Harvey S. Baker, M.D., Bradford, Pa., August 17.——C. B. Belt, M.D., Boston, Mass., August 23, aged 51 years.——D. W. Boyd, M.D., Yoakum, Texas, August 18.——N. Chapman, M.D., Washington, D. C., August 16, aged 58 years.——G. A. Henry, M.D., Detroit, Mich., August 19, aged 35 years.——C. M. Hibbard, M.D., St. Louis, Mo., August 22.——Caleb C. Johnson, M.D., Hillsdale, Mich., August 28, aged 84 years.——W. D. Lonergan, M.D., Rogers Park, Chicago, August 28, aged 57 years.——E. G. Moore, M.D., Spring Valley, Ill., August 11.——John Morehead, M.D., Dixon, Ky.——John Borland Wallace, M.D., Detroit, Mich., August 21, aged 48 years.

PUBLIC HEALTH.

Yellow Fever in the South.—According to press dispatches of August 25, Dr. Carter of the United States Marine Hospital Service, who has been stationed at Franklin, La., declares the case previously reported there as suspicious to be genuine yellow fever. This is the second case reported at Franklin.

Barbers Preparing a Bill.—According to the *Chicago Record* of August 25, the barbers and some of their friends in the medical profession will prepare a bill to present to the legislature, which, if it becomes a law, will require barbers to disinfect all tools, towels, sponges, brushes and whatever articles may be required in the pursuit of their business. Under this law nothing but strictly antiseptic barber shops will be allowed in Illinois. The bill will provide that all barber shops shall be under the control of the State Board of Health, and each pay a license of $10 a year. The license shall only be granted after a thorough examination of the applicant's shop has been made and its sanitary conditions approved. Each individual barber shall also pass an examination as to his knowledge of the trade and as to his knowledge of the use of disinfectants. The barber shall also have worked at his trade a certain number of

years. The tools, brushes, towels and other articles in use in the shop must be thoroughly sterilized after being used, according to regulations the Board of Health may make.

Polluted Passaic River.—According to the New York *Herald*, it looks as if nothing less than a little infusion of state socialism would be required to settle the question of disposing of the Passaic river water-supply over in New Jersey. The welfare, the health and the lives of 600,000 of the suburban residents of New York are involved in keeping the Passaic river pure, yet the utmost that the state of New Jersey has done to protect these interests has been to appoint a Commission to see what can be done about it. Without waiting for the action of the Commission, the East Jersey Water Company has made arrangements to draw off most of the water-supply from up stream in order to sell it to its customers; and this has called out a protest from the interests lower down, which are using the river as a sewer and which are afraid that there will not be enough water left to flush their sewage. Such a condition of affairs is a menace to the public health and an insult to the public intelligence, but it only represents the average result of a contest between franchise-grabbers and stream-polluters on one side and the people on the other.

Sanitation of Havana—Sewerage the Prime Necessity.—A writer in the *Watchman* points out what must be done to make Havana habitable. It has often been stated that if a canal should be cut from the bottom of the cul-de-sac which forms the Harbor of Havana, through to the sea, the sanitary condition of the city would be enormously improved. Doubtless such a canal would do something, but probably not so much as is commonly supposed. The most unwholesome wards in Havana, he says, are not those that front the harbor, but those which front the sea. The entire city must be repaved and a complete system of sewers constructed, with a pumping-station for discharging sewage into the ocean. When Havana becomes a city of the United States all this will be done. It will cost millions upon millions, but one of the principal plague-spots of the western continent will be cleansed, and incidentally the work will afford a series of fat jobs to the public officials and contractors. It will be interesting to observe whether the same system is followed in Havana that prevails in most of our cities, where streets are paved and sewered, *i. e.*, pave them thoroughly and then tear up the pavement afterward to put in the sewers.

A Traveling Show Spreads Smallpox in Ohio.—The July issue of the *Ohio Sanitary Bulletin* reports an outbreak of variola in that State, beginning in the early part of May, at Delphos, in Van Wert County. The infection is believed to have originated from a traveling dramatic show, some members of which were found out to have been affected with some eruptive disease. The first townsman to have the smallpox had attended the show, and was about the cars, carrying the show-people, while they were being unloaded. Fifteen days later he came down with the disease. Several other mild cases followed and these were mistaken for varicella, the usual story. In June the State Board of Health was called upon to make an investigation, and on July 1 it was known that not less than twelve cases of the disease had been recognized and reported upon, as the law directs. Up to July 15 there had been three other cases reported at that place. The local health authorities were at first negligent in enforcing quarantine, and many people were exposed to the disease. At present rigid measures are being enforced, which, it is hoped, will prevent its further spread. At Van Wert, which is near Delphos, two boys were taken sick about the middle of May, with what was called chickenpox. These boys had been to Delphos and were probably exposed there. The true nature of the disease was not recognized until a third case of smallpox developed on June 23. Consequently many persons were exposed to the first two cases. From that time on, the Board of Health, realizing the gravity of the o break, has been very active in enforcing proper restric measures. On June 29 an investigation was made by the St Board of Health, and five cases, counting the two cases ca chickenpox, had developed at Van Wert. To July 15, e cases were reported: The case near Bays, a woman who c from Pennsylvania, was taken ill shortly after her arriva her brother's house. This case was well isolated, and but persons have been exposed. July 14 the brother of this pati was reported as having the disease.

Water-Supply of Philadelphia.—A report by Dr. Benjamin L of the Pennsylvania Board of Health, has been made, setti forth some of the most flagrant examples of fouling of Schuylkill sources of the water-supply of Philadelphia. T report is based on the results of a recent tour of inspecti made in April and May. Dr. Lee was accompanied by Drs. G. Abbott, Geo. Woodward, R. L. Pitfield, a photograph and others. The banks on either side of the Schuylkill w carefully examined, as well as the outlets of sewers and strea and samples of water were taken for examination at the v ous points of pollution. The place at which the most seri pollution was found was near Lafeyette station and Shawm near the pumping station of the Germantown water-supp Mill Creek, Rose Glen, and Gulf Creek.

"At Conshocken, both the canal and Schuylkill River w found to be receiving many kinds of filth. At Plymouth Cr pipes were found conveying sewage laid under the water-qu ter across the canal, and discharging themselves into the wa which presented the appearance of indigo-blue mixed with The odor was such that the committee were compelled to t away. From this point all the way to Bridgeport the wa was thick with decaying vegetable matter and refuse thr from the houses, and the stench arising therefrom was alm unbearable. Numerous refuse-heaps also drained into stream. The committee found that the farther it went up canal the worse became the pollution. Not only were no me whatever taken to prevent the household drainage and hu excreta from entering the river, but apparently nothing left undone to perfect arrangements for the conveyance of s matter to the canal. All seemed to consider the canal a c mon receptacle for everything they wanted to get rid of wh might cause disease if allowed to remain on land. Added this were the washings from several dyeing factories.

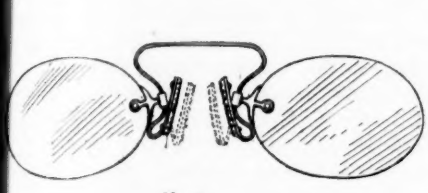
"Pottstown, which for many years past has been conside one of the chief sources of pollution, was found to be cont uting largely. A large population of Hungarians living in h along the creek on property owned by one of the large ma facturing firms, made use of the stream as a receptacle for bage and refuse of every description. The privies for th people had been placed by the owners of the mill on brid and platforms directly over the water. In addition Manatawny Creek, which at a number of points was badly luted, are Tan Yard Run and Hubbins Run, both of which charge into the river an immense quantity of house drain Nearly all of the houses of Birdsborough were found to d into the canal and into Hay Creek, which empties into Schuylkill. The inspection was concluded at Reading. S ples of water at many points were taken. This city has great expense, in compliance with the recommendations of State Board of Health, introduced a sewage purification p which, although still to a certain extent on trial, is doing cellent work. The sand which is scraped from its surf however, is deposited at a point where in heavy rains, dr age from it may reach the stream. A plan is in contempla for roasting this sand so that it may be used again. While conditions above described indicate pollution of this strea the most serious and fatal character, yet your Secretary c not but be impressed with the fact that many large manu turing establishments, which formerly employed thousand operatives and the filth from which immediately entered stream, are now standing idle. This is owing in some stances, as for instance in the case of the iron works, to fact of a direct falling off in the business, in others, as in case of paper mills, to the fact that modern machinery is much greater weight than formerly used that the build are not sufficiently strong to support it. There are undo edly many other streams in the State used as sources of w supply for domestic purposes which are equally as badly luted as the Schylkill. This fact, together with the dem stration afforded by the city of Reading of the possibili purifying sewage on a large scale, should make an argume favor of stringent legislation against river pollution.

NEW INSTRUMENTS.

A PRACTICAL ADJUSTABLE NOSE GUARD.

BY ALBERT B. HALE, M.D.
CHICAGO, ILL.

t sometimes falls to the lot of the practicing opthalmologist furnish eyeglasses as well as the prescription for the lenses. such cases I have seen no advantage in keeping a large eler's stock of frames and nose-pieces, and I have tried to tent myself with one pattern of simple nose guard, which ld be ordered or fitted in the office, to suit nearly any nose d purpose required. This device has been manufactured my suggestion by Edw. Allen and Co., opticians, of Chicago;



No. 1.

No. 2.

fully warrants the term "adjustable," being so constructed t it may be adapted to the positions met by different styles nose-pieces. The cuts show the adjustments: No. 1 is a e view showing how the guard has a lateral movement; . 2 is a side view with its forward and backward movement. As office furniture, particularly for the out-of-town doctor o does not always have an optician at hand, I know of thing that seems to serve its purpose so well.

MISCELLANY.

A Singular Bequest.—The will of the late Dr. Theodore H. E. ruel a graduate of the Jefferson School, class of 1867, which s admitted to probate in Philadelphia lately, contains this use: "My niece, Mrs. Bertha Lutz, shall have all that is rtaining to the family of Gruel. I wish that she should take eat care of a basket containing the hair of members of my mily for a hundred and fifty years back."

Endothelioma of the Cervix Uteri.—In the *Johns Hopkins Hospital Bulletin* for August, Hundon adds a third case to the two eady reported in medical literature. The uterus and upper rt of the vagina was removed, with extensive tissue at the se of the broad ligaments. The growth had extended beyond ssibility of complete removal before attention was drawn to and the patient died on the fifteenth day, of sepsis.

Cured by Laparotomy Alone.—Lejars reports two new cases of bercular peritonitis permanently cured. In one the symptms presented the picture of intestinal occlusion; in the other, ose of appendicitis with general peritonitis. Tubercular ions were found when the abdomen was opened, and it was ened without further interference, followed by the complete bsidence of all trouble.—*Echo Méd. du Nord.*, June 26.

Medical Department of the University of California.—The Faculty ld a special meeting on August 18 in order to appoint a committee to confer with the Regents of the State University to range for the passing of the control of the Medical Department entirely into the hands of the Regents of the University. o immediate changes in the operation of the school are anticited. At that meeting, Dr. John M. Williamson, Professor of natomy, was appointed lecturer on Surgery, vice Dr. W. E. aylor resigned.

Official "Pay Courses."—At the *Paris Faculté de Médicine*, ficial "pay courses" have recently been inaugurated, optional, e class limited to twenty, paying fifty francs each, intended pecially for French and foreign physicians. Professor agrégé artmann has charge of the course in operative medicine, which is to be strictly practical; other courses are in contemplation. The innovation has been warmly welcomed, as similar courses have contributed much to the success of the Berlin and Vienna schools.

Woman's Medical College of Pennsylvania.—The *Philadelphia Medical Journal* has been advised that this old and worthy school is to be materially improved by several noteworthy additions. A new wing will be added to the hospital building and a new laboratory building, three stories in height, is to be erected. The basement of the latter will contain a central heat and light plant; the first story will be devoted to a gymnasium and hygienic laboratory, the second to a lecture-hall and a physiologic laboratory, and the third to laboratories of normal and pathologic histology.

Prognostics by Proxy.—It is related of a noted English bishop who had for years nourished the fear that he would some day become paralyzed, that on one occasion at a dinner, he suddenly interrupted the guests at the table by exclaiming that his worst fears had been realized at last; that he was paralyzed in his right lower thigh; that he had been pinching his thighs for some moments and was unable to detect the slightest feeling. A lady sitting next to him assured him that he was mistaken, for it was her limb he had been pinching instead of his, the silk of the lady's dress being difficult to detect from the bishop's robe.—*Philadelphia Medical Journal.*

A Heroic Surgeon.—In the present war our American youths have borne a valiant part, and some of our educated young men who saw battle for the first time fought with such dash and fire that already the action has given character in the eyes of Europe to our American navy. Says one writer: "In the final charge at San Juan deeds of heroism enough were done to fill a volume. One of the men of Troop E, desperately wounded, was lying square between the lines of fire. Surgeon Church hurried to his side, and with bullets pelting all around him, calmly dressed the man's wound, bandaged it and walked unconcernedly back, soon returning with two men and a litter."

St. Anthony's Hospital, a new Catholic institution located at West Nineteenth Street and Douglas Park Boulevard, Chicago, was dedicated by Archbishop Feehan, August 28. The building is four stories high and has a basement. The walls are of Bedford stone and light-colored pressed brick. There is a fine gable at each end and in the center of the front, and from the roof springs a pretentious spire. Among the commendable features are fireproof construction, elevator service, iron staircases, verandas on the rear court, a complete system of ventilation, and the cheerful appearance of the façade with its covered carriage entrance. The cost, $85,000, includes $15,000 for the land. The hospital is the property of the Franciscan Sisters of the Sacred Heart.

Specific Gravity of Urine.—Brown (*Johns Hopkins Hospital Bulletin* for August) reports results of experiments to ascertain the effect of ether anesthesia on the specfic gravity of the urine, there being markedly diminished secretion of the solid constituents, but, at least in a certain number of cases, less marked effect on the elimination of water. In a second series of experiments, there was marked decrease in specific gravity, following enemata of normal salt solution, probably due to increase in the quantity of water eliminated rather than lessening of the solid constituents excreted. He suggests "the possibility of giving rectal enemata of normal salt solution or water, to increase the flow of urine, and thereby probably to stimulate diuresis in some affections of the kidney, and as a method of internal irrigation, as it were, in some cases of cystitis."

Scurvy in Children.—Bovaird (*Phila. Med. Jour.* for August 20) groups the cases since 1894, 64 in number, bringing the

total cases in this country to 100. Of these 64 cases, the youngest was six months old, the oldest 2½ years. Four only were over eighteen months of age, and 35 from nine to thirteen months. Of 50 cases in which the sex was noted, 24 were girls and 26 boys. Of the 64 cases, 52 presented a definite gum affection. The gums were normal in 10 and in 2 the record was incomplete. From his tabulations he concludes that: 1. The contention that there is no evidence that scurvy has been caused by sterilized milk must be given up. The evidence here presented is not considered conclusive, but it renders it highly probable that persistent sterilization of the food by boiling may produce scurvy. 2. It must even be admitted that scurvy may develop in nurslings.

Women in the Medical Profession.—The recent German Aerztetag or Congress of Physicians devoted one session to a consideration of this question, finally officially adopting the conclusions of Prof. Pentzold's address; "If women should enter the profession in large numbers, which is however scarcely probable as long as the requirements are the same as for male students, and as long as no special schools are founded to facilitate their studies, the sick would not be materially benefited; it would prove no benefit, to say the least, for German universities and German science; it would detract from the dignity of the profession, and the public welfare would not be promoted thereby. For these reasons it is unwise for medicine to be the first of the learned professions to admit women."

Deligation of the Innominate Artery.—Dr. J. T. Lewtas (*Indian Lancet*, May 16) reports the successful ligation of the innominate artery for secondary hemorrhage following an injury to the subclavian artery due to the bursting of a gun. The man entered the hospital a month after the injury, complaining of pain and stiffness in the neck and shoulder. Alarming hemorrhage followed the removal of a flat piece of steel, and the man became unconscious from loss of blood. The operation was performed without an anesthetic, and the patient seemed in a hopeless condition. He rallied, however, and made a slow but satisfactory recovery, being able six months after the operation to earn his living as a field-laborer and stating that his right arm is as strong and useful as his left.

The *Philadelphia Medical Journal* makes the above annotation, and adds that while the innominate artery has been deligated a considerable number of times, this case is believed to be the third successful operation.

Diphtheria of the Eye.—McCollum, writing on "Antitoxin in the Treatment of Diphtheria" (*Boston Med. and Surg. Jour.*, for August 18), mentions fifteen cases in which the sight would undoubtedly have been lost except for the heroic administration of antitoxin. In only one of those cases was there destruction of the organ, and this was in abnormal condition at the commencement of the attack. "When a diphtheritic membrane appears in the eye the effect of antitoxin on the membrane can be more carefully studied than when it appears in the pharynx. In some of these cases 2000 units were given as the initial dose, and this was repeated in six or eight hours, if there was not a marked improvement." Except in very young infants, he believes the initial dose should be 2000 units, and in severe cases 4000 units may be given; the more concentrated the better, as the possible source of danger lies in the amount of fluid, and not in the inherent property of the antitoxin.

The Artichoke as a Culture-medium in Microbiology.—Bacterial cultures have been made on almost all vegetables, but the potato and the carrot are the principal ones in daily use in bacteriology. M. Roger has, however, reported to the Society of Biology, at the July meeting, that in his opinion the artichoke possesses several advantageous qualities in this respect. Nothing is more simple than to prepare it for the purpose. After having stripped off the scales the thick part is cut up into little cubes, care being taken to preserve the fibers (foin). The pieces are placed in tubes plugged with damp wadding, the fibers being uppermost, so that the culture-medium is represented by a fleshy mass surmounted by a sort of tuft. When the wadding is inserted the whole is heated in an oven to 115 degrees C. for a quarter of an hour. In making the inoculation the germs must be deposited at the point of insertion of the flowers.—London *Lancet*, July 30.

Antitoxin Treatment of Tetanus.—Lund (*Boston Med. and Surg. Jour.*, August 18) reviews the treatment with tetanus antitoxin to date, and concludes that: 1. The statistics show a diminution in the mortality, but the cases treated have as yet been insufficient in number, the reports too indefinite, and probably not all fatal cases included. 2. The more careful study shows less evidence that the antitoxin treatment, and not the mild course of the disease, determined the favorable course. 3. In the majority of instances the dose, especially the initial dose, has been too small. 4. The treatment demands further trial. 5. Efforts to secure a stronger product with a sufficiently large initial dose and at the earliest possible moment, directly into the blood-stream will make it more effective. He believes that for immunizing purposes antitoxin has a valuable field, and the treatment should consist of: Thorough disinfection of the primary focus by mechanical means, including, if necessary and practicable, amputation; the thorough local employment of such chemic antiseptics as have been shown to destroy both the bacilli and the toxin; symptomatic treatment by sedatives, etc.; thorough diuresis; intravenous injection of an amount of antitoxic serum which shall contain at least 500 antitoxin units, at the earliest possible moment.

Hemorrage Following Tonsillotomy.—Zimmermann (*Archives of Otology* for August) says that tonsillotomy should never be performed in certain constitutional affections, as in hemophilic persons or those who for any reason have a tendency to bleed profusely, or in hypertrophy of the left ventricle; hemorrhage occurs more frequently in adults than in children. In acute inflammation it should not be performed, hyperemia being present and a greater tendency to bleeding. After the operation the patient should keep quiet, avoid alcoholics, not use his voice, not travel, and not eat solid food for several days. Gargling with cold water is good after the operation, but not for too long a time, as it may interfere with the formation of thrombi. After the bleeding ceases, dust the surface with iodoform mixed with tannic acid. In persistent hemorrhage, resort to the Paquelin thermocautery, or a thick probe made redhot. Cauterization not being successful, he grasps the bleeding spot with an artery forceps which he leaves in place for a while and then makes torsion. "In all cases of severe bleeding after tonsilotomy the patient ought to be kept in an erect position, so that by the resulting anemia of the brain he is apt to faint, as a spontaneous restraint of the bleeding has been observed in cases in which an attack of syncope occurred."

Anecdote Concerning Dr. William Pepper.—The *Philadelphia Medical Journal*, August 6, tells the following incident of his later life, tending to show the heroic temperament and habit of its subject. The writer says: "We are enabled to put on record a pretty little incident that occurred within the past few months which is related in illustration of the character of the man. A visitor calling upon him found him asleep in his office. He opened his eyes and gave a cheerful though weary greeting. At this moment a boy brought in a letter. Without rising, Dr. Pepper read it and handed it with the attached slip of paper to his visitor with the remark, 'This is the sort of thing that is killing me.' When the visitor read the slip, which was a check for $10,000 for one of Dr. Pepper's numerous works of beneficence, he said, 'Most men would be made very much more alive by such work as this of yours.' 'Each endowment I get costs me so much life.' To the further que

why he should not prolong his life by working less intensely and constantly, he half contemptuously said, 'If the work is done in ten years for which others take thirty, it is in reality doubled, and more than doubled.' It was the public duty upon which his eye was ever fixed, and everything, even his own life, certainly his own selfish interest, must be sacrificed to the noble cause. He might be called our greatest institution builder. He was assuredly Philadelphia's best friend and greatest citizen."

The Fool on a Cycle.—In spite of the object lessons which insults on cylists give, and in spite of police prosecutions, the number of cycling accidents increases, while it is evident that the majority of the casualities follow upon reckless riding. The most common cause of disaster is want of caution in descending hills. The effort of the National Cylists' Union to prevent accidents by placing notice-boards at the top of all dangerous hills is treated with contempt by many cylists, who regard such boards as a playful invitation to "coast" to the bottom. In a recent inquest held at Hull, the coroner is reported to have said that if cyclists persisted in disregarding notices which were exhibited for their personal safety it might be necessary for the protection of the public to require all cyclists to dismount on going down hills which were marked "dangerous," and to inflict a heavy fine in every case where the notice was disregarded. We quite agree. "Put a fool on a cycle and he will ride to destruction," makes a very good reading of an old saw, and describes a situation which we can regard with equanimity. But when the fool on his way to his proper destination thinks well to smash into other people it is time to put a limit to his folly.—London *Lancet*, August 6.

The Histopathology of Herpes Iris.—Dr. L. C. Pardee in the *Bulletin of the Johns Hopkins Hospital* for July reports two cases of this disease, with the results of a close study of its pathology. His report shows that the histopathology may be summarized as an acute exudative inflammation of the upper part of the corium, with dilatation of the superficial network of blood-vessels and lymphatics (the latter being slight), accompanied by a considerable emigration of polynuclear leucocytes, which in one case became almost immediately disintegrated after leaving the capillaries of the papillæ. The latter, as the process extended, became practically filled with nuclear detritus, and, by the confluence of neighboring papillæ similarly affected, the vesicle was formed. This phenomenon of nuclear fragmentation does not appear to have been noted by any previous observer. In both cases the vesicle was formed by the lifting of the entire epidermis from the papillary body, the former becoming compressed over the vesicle in Case 1 and in Case 2 appearing swollen and edematous, and showing more or less dilatation of the inter-epithelial spaces and detachment of the cells of the basal layers of the epithelium. The contents of the vesicles were always the same, and consisted of coagulated serum, polynuclear and mononuclear leucocytes, occasional detached epithelial cells, strands of fibrin, and in Case 1 much nuclear detritis. No infarcts of blood-vessels and no hemorrhages were noted. The sweat apparatus, hair follicles and sebaceous glands were unaffected.

The Typewriter.—Bizzozzero in Italy, and other foreign writers, have recently been extolling the typewriter as almost a necessity for every professional man, comparing the easy, erect attitude at the machine with the position in writing; fingers and arms cramped, body stooping and pressed against the desk table. The injurious effects are particularly noticeable after a hearty meal, or with failing eyesight. The typewriter does not strain the eyes; with practice it is possible to use it in the dark. The time saved is also a great advantage, as much less time is required to typewrite the same amount of matter. The Lind were among the first to recognize the utility of the typewriter. A light, inexpensive one is now made for them to communicate with each other in the dot language used among them, and the same machine, made heavier, with a pedal attachment, stamps a brass plate, from which any number of copies and books can be printed. The physician also requires a light, compact, easily cleaned, durable and comparatively inexpensive typewriter. These advantages are only to be secured with a steel type-wheel machine. The types are all on one small steel spool, which can be taken out and cleaned in a moment. They are made interchangeable, with or without medical characters, and in any language. Another advantage of this style is that the machine antomatically stops printing when the end of the line is reached. Many a physician has been enabled to lengthen and utilize his much-needed vacation by having his portable typewriter with him, catching up with his correspondence and "getting up those papers" for which he has been collecting notes. Where speed is not an object, no skill is required to run the machine; hesitating work and trembling fingers do not affect the printed copy, and writers all find after a little practice that literary work is much facilitated by composing on the typewriter, which shows each sentence in print. The *Presse Méd.*, recently asserted that "all American physicians now have typewriters in their offices for their personal use" which exaggerated statement we can accept as the customary tribute to our Yankee "appreciation of a good thing when we see it."

Incarceration of the Penis.—Dr. Theodor Floras, principal medical officer of the Antatolian Railway, Constantinople, reports (*Deutsche Med. Woch.*, of July 14) a case of incarceration of the penis. The patient was a railway employe, about 55 years of age, who, presumably while in a state of intoxication, in the presence of a companion, passed his relaxed penis through the aperture of an iron screw-nut, this aperture having a width of only 1.5 centimeters (0.6 in.). The matter was treated as a joke, and encouraged by his companion he forced the nut with a twisting movement until it arrived at the attachment of the ligamentum suspensorium urethræ. He was subsequently unable to remove the nut, but nevertheless went to work that same day and also the next. On the evening of this second day he consulted a surgeon, who drew off his retained urine with a fine catheter, prescribed a diuretic, and directed lead lotion to be applied to the penis. It was only next morning that Dr. Floras saw him, more than thirty-six hours after the application of the nut. The man was then in a state of the greatest alarm and uneasiness; his penis hung down like an enormous, tightly-filled sausage, and the diffuse swelling was so great that it was difficult to find the nut among the infiltrated tissues. Amputation seemed to be unavoidable, but before resorting to it the man was taken to the engineering shop and held by two men in the upright position against a large anvil. The penis, with the square nut encircling it, was then held horizontally on the anvil, a slight cut was made in the nut by a sharp chisel, struck by a hammer, and this cut was cautiously deepened until an iron wedge could be driven into it, whereupon the nut broke in two. The internal screw threads of the nut had sunk into the tissues of the urethra and had caused ulcerative and necrotic changes, but in a few days all these symptoms disappeared, and the man returned to his work. Dr. Floras refers to a somewhat similar case recorded by M. Ameisen, quoted in the *C. für Chirurgie* for 1897, p. 1166.—London *Lancet*, July 23.

Use of the Galvanocautery.—Rice (*N. Y. Med. Jour.* for August 20), in a paper on "In What Conditions of the Nose, Pharynx and Larynx the Galvanocautery Should and Should not be Employed," says: "Cicatrices in the nose are always to be avoided, and should be made as small as possible. The galvanocautery puncture needs to be carefully done with an electrode at not more than a red heat. The point should be introduced cold, and the current turned on perhaps three times while the point is in the same place, until sufficient depth of puncture is ob-

tained. The smaller the diameter of the puncture the better. This method is resorted to in anterior turbinated swellings only after all obstructions pertaining to the septum have been removed. The galvanocautery should never be employed at so great a heat that the opposing surfaces are scorched. There are several abnormities of the nasal septum which may be corrected with the electric cautery. Small spurs of bone, etc., on the septum may be reduced by a single application of the cautery, sparingly, making a wound not more than one-eighth of an inch in diameter. Where the nasal partition is deviated as a whole, producing marked obstruction in one nostril, it should not be used. The cautery is also of avail as a styptic in some cases of profuse nose bleeding, and prominences of the septum, three-quarters of the way back, can be nicely contracted by the cautery. The use of the cautery loop or écraseur in removing fibrous and semifibrous growths from the vault of the pharynx, he considers the only conditions of the post-nasal space demanding the galvanocautery, its greatest use being in the middle pharynx. It should never be used in the larynx, where few conditions would demand it, except by the experienced.

American Medical Operations in Persia.—Drs. Wishard and Mary J. Smith are at present in charge of the American Hospital and Dispensary at the Persian capital. The hospital is a well-built stone building, laid out on a scale too extensive for the means and force; but the two completed wings, with the well-equipped dispensary just erected, wholly with money given in Teheran, constitute an effective plant. Every day is dispensary day, and the crowds of men and women flock into their separate rooms. The firman under which the hospital was erected, and the customs and prejudices of the country, prevent the reception of women into the hospital. In Tabriz the missionaries feel it necessary to proceed with caution in the establishment of a hospital for women in a residential building, that has already been set apart for that object when the fit time shall have come to occupy it; the popular mind has not yet been educated up to the point of accepting that line of charitable effort. In Teheran, however, the women come in swarms to the dispensary. Dr. Wishard is obliged to act with constant tact and discretion, and under constant limitations caused by the prejudices of the people. For example, on one occasion he removed a tumor from the eyelid of a young woman, who, with the aid of two friends, managed to keep most of her face covered with her heavy veil during the greater part of the operation, exposing only the eye, and not minding blood and water and pain, so long as she could maintain the form of hiding her face from us. She was not handsome; few of the women are. It is only a fruit of the suspiciousness which shows itself in certain western countries in hiding the points of a race-horse. Woman is an animal to be guarded, suspected, hidden from others and never to be trusted. Each man's wife is a prize animal for exhibition only to him. This is the case in the cities, while in the villages women are as careless of veils almost as with us. Medical missionaries need to be careful as to every assumption of the responsibility for cases. The result, whatever it may be, is credited to the doctor. Dying patients it is dangerous to receive, as a few deaths in the hospital, maliciously repeated in some false tale by an enemy, never lacking in a Moslem land, might bring a period of long and utter uselessness. Yet mercy ever triumphs over prudence. Men are often brought wounded or diseased to the hospital gate, and thrown down there. One was left in the depth of winter in a ditch at the gate, and was found when nearly dead.

Fracture of the Patella.—Stimson (*Annals of Surgery* for August) advocates the single free incision as tending to the better protection of the patient in the treatment of this fracture. That the operation can be done without once touching the cut tissues with the fingers, he considers an advantage. He has frequently done the operation under local anesthesia as cocain or freezing. He makes an incision in the median line, slightly overlapping both fragments, then draws the sides apart and in turn lifts the fragments with a sharp retractor freeing the surface from clot or fringe. While they are thus held up, the joint is thoroughly washed with a hot salt solution. The fragments are then drawn snugly together with hooks, the fringe adjusted, and two or three catgut sutures placed in the periosteum along the edge of the fracture, or a single silk or stout catgut suture passed through the tendon and the ligamentum patellæ so that its two strands lie on the front of the bone. In the rents in the lateral expansions he sometimes places additional sutures. With a continuous silk suture the incision is closed and, without drainage, the dressing applied, the limb being bound upon a posterior splint and the patient kept in bed with the foot elevated for a week, when the silk suture of the incision is removed and a light plaster of paris encasement applied. This permits the patient to use crutches in a few days, and after a month the dressing is cut and the patient directed to wear it in the daytime only. He finds that the joint can be flexed 90 degrees by the end of the third month, often earlier, the splint usually being entirely discarded before that time.

International Red Cross Assistance for the United States.—A communication has recently been received by the Secretary of State, from Hon. And. D. White, the ambassador of the United States at Berlin, inviting attention to an appeal made to the people of Germany for funds to relieve the suffering growing out of the war between the United States and Spain. The appeal was made by the Central Committee of the German Society of the Red Cross at the instance of the International Committee at Geneva. The following is a translation of the appeal:

The war which has arisen between Spain and America is beginning to cause greater misery, especially owing to diseases which have broken out, so that a request for aid has been addressed to us here, through the medium of the International Committee of the Red Cross at Geneva. The undersigned Central Committee deems it its duty, in view of the ties which unite the Societies of the Red Cross, and with a grateful recollection of the aid rendered from abroad to the German Volunteer Associations for the care of the wounded in war, to furnish pecuniary assistance to both the American and Spanish Societies of the Red Cross in their efforts to alleviate the sufferings of war. In order, however, to prevent too great a diminution of the funds of our Societies of the Red Cross, upon which there is a great demand for their own work and for objects which have greater claims upon them, we apply to such circles in Germany as are willing to contribute to the relief of the wounded and sick in the present war, with the request that they will entrust such contributions to us, and thereby enable us to show the feelings of humanity which are always deeply impressed upon German hearts, even for the sufferings of strangers, and which have been proved by liberal gifts. Our undersigned treasurer will receive contributions marked: "For the Societies of the Red Cross in America and Spain," and will acknowledge their receipt in the press. We also request all the country associations of the Red Cross in Germany to open places for the receipt of contributions.

The appeal is signed by the members of the Central Committee of the German Unions of the Red Cross: B. von der Kneseback, Vice-Upper-Master of the Ceremonies and Royal Chamberlain, President; Von Spitz, General of Infantry on the active list, First Vice-president; Dr. Koch, President of the Directory of the Imperial Bank and Privy Councillor, Second Vice-president; Lademann, First State Attorney in the Second Royal District Court of Berlin, First Secretary; Marcinowski, Privy-Upper-Financial-Councillor, Second Secretary; Dr. Lieber, Surgeon-General on the retired list, General Secretary; Von Burchard, President of the Board of Maritime Commerce, Active Privy Councillor, Treasurer. The Central Committee of the German Unions led off the subscription list with a contribution of 10,000 marks, which, so far as

he United States is concerned, may all go to the Spanish Red Cross. Our own National Society has been generously supported by the people, and the many other relief associations that have been formed have been vying with it and with each other in their efforts on behalf of the sick and wounded. Nevertheless it is gratifying to know that through the medium of the International Red Cross material assistance would have come to us, had we required it, from the sympathetic people of other countries.

Service on an Army Hospital Train.—We have been permitted to copy the report for the week ending August 7, rendered by Major Charles Richards, Surgeon U. S. Army, as illustrating the arduous service of the Hospital Train of Pullman cars on the railroads between Southern camps and general hospitals in the interior: At the beginning of the week, July 31, 1898, the train was en route to Tampa, Fla., from Newport, Ky., in compliance with orders received from the Surgeon-General on the previous day. Tampa was reached next day, August 1, at 7:30 P. M., about three hours late, the delay being due to the movement of troops north from Tampa on the same railroad. At this point, Assistant-Surgeon Stiles, U. S. Army, assistant medical officer and acting quartermaster of the train, was taken sick and excused from all duty. Owing to the poor facilities at Tampa for watering trains, it was not until after midnight that the train reached Ybor City, where patients were to be loaded. Word had, in the meantime, been sent to the Chief Surgeon, Fourth Army Corps, that unless patients had already been sent to the station at Ybor City it would be best to wait until the following morning before taking them on the train. However, twenty-eight cases were at the station on the arrival of the train, and these were placed upon the cars by 2 o'clock, A. M. The remaining cases began to arrive a few hours later, but as it rained almost incessantly it was 1:30 P. M. before all the patients were on the train. The total number of patients received was 159. Of these, 121 had the diagnosis typhoid fever and 11 malarial fever. The general condition of the patients received was much better than on some of the previous trips, most of the cases of typhoid fever being apparently in the first week of the disease. At 1:45 P. M. the train left for Fort McPherson, Ga., which point was reached the following morning, August 3, at 7 o'clock, and by noon all the sick had been removed from the train, including one member of the Hospital Corps detachment on duty with the train. Assistant-Surgeon Stiles, being still unfit for duty, was permitted to leave train here and go to Atlanta. Many minor repairs were needed, especially to the interior of the cars, and so far as the officer in charge was aware there was no urgency for an immediate return to Tampa; he, therefore, requested the Surgeon-General to allow two days at Atlanta for these repairs. This was granted, and the train was taken to the Southern Railway shops to enable this to be done. By the time the repairs were completed, August 6, orders had been received to take the train to Fernandina, Fla., to receive sick for Fort McPherson, Ga., and to take convalescents and those able to travel to Washington Barracks, D. C. In accordance with these instructions the train left Atlanta at 4:30 P. M., August 6, and proceeded to Fernandina. As the train was held at Atlanta for nearly three days undergoing repairs, the number of cases transported during the week was under the average. The number of miles traveled was 1700. Although the number of patients carried was less than usual the duties were, perhaps, more arduous for all than those of any previous week in the record of the train. Some patients were received after midnight, which necessitated their being visited and prescribed for immediately after their reception. The remainder were received during a severe rain-storm to which the entire personnel of the train was exposed for hours. But few of the patients were able to walk and had to be carried into and out of the train, all of which work devolved upon the train detachment. These men performed their trying duties cheerfully and satisfactorily. This might not be worthy of note but for the fact, that with a single exception, all of the privates of the detachment have been less than three months in the service, and that in addition to the physical labor of carrying 120 to 130 patients into and out of the cars at the beginning and end of each journey, they have had but little rest, either day or night, while patients are in transit, that their meals are often irregularly served, patients always being looked after first, and that sleep on a railroad car in motion is not as restful as sleep under ordinary conditions.

The Human Skeleton.—The following alleged boy's composition on bones is doubtless the best thing of its kind that has yet appeared. It is from the San Francisco *Impress*. "Bones are the framework of the human body. If I had no bones in me I should not have so much shape as I have now. If I had no bones in me I should not have so much motion as I have now and Grandma would be glad, but I like to have motion. Bones give me motion, because they are something hard for motion to cling to. If I had no bones, my brains, lungs, head and larger blood-vessels would be lying around in me sort of loose-like, and might get hurted, but now the bones get hurted, but not much lest it is a hard hit. If my bones were burned I should be all brittle, and you could crumble me up because all the animal would be out of me. If I was soaked in a kind of acid, I would be limber. Teacher showed us some bones that had been soaked. I could tie a knot in one. I had rather be soaked than burned. Some of my bones don't grow snug to my other bones like the branches of a tree do, and I'm glad they don't, for if they did I couldn't play leap-frog and other good games I know. The reason they don't grow that way is because they have joints. Joints is good things to have in bones. There are three kinds. The ball and the socket joint is like my shoulder joint. Teacher showed it to us, only it was the thigh of a cow. One end was round and smooth and whitish, that is the ball end. The other end is the socket. It is saucer-like and oils itself. Another joint is the hinge joint, like my elbow. It swings back and forth, oiling itself, and never creaks like the school-room door does. The other joint ain't much of a joint. It's in the skull and don't have no motion. All of my bones put together in their right places make a skeleton. If I leave out some or put some in their wrong places it ain't no skeleton. Crippled and deformed people don't have no skeletons. Some animals have their skeleton on the outside. I'm glad I ain't them animals, for my skeleton like it is on the chart wouldn't look well on the outside."

Washington.

HEALTH OF THE DISTRICT.—The report of Health Officer Woodward for the week ended August 20, showed the total number of deaths to have been 112, of which 56 were white and 56 colored. The annual death-rate for whites was 15.20; for colored, 32.80. The principal causes of death were: Kidney diseases, 12; diarrheal diseases, 9; nervous diseases, 11; pulmonary consumption, 14. There were 3 fatal cases of diphtheria and 10 of typhoid fever. At the close of the week there were 24 cases of diphtheria and 25 cases of scarlet fever under treatment. The annual report shows, for this year, the lowest death-rate in the history of the city, it being 19.32 per thousand.

ENFORCES THE MEDICAL PRACTICE ACT.—Health Officer Woodward is to be congratulated on the promptness with which he enforces the Medical Practice Act in force in the District of Columbia. He has recently notified Dr. A. M. Curtis that no death certificates bearing his signature will be accepted as valid by the Health Department. Dr. Curtis is a political appointee, under the Interior Department, which, strange to say, has control and directs the management of the Freedman's Hospital. While Dr. Curtis, it appears, was appointed after certification of the Civil Service Commission, he has not complied with the Act of Congress, requiring registration in the Health Office upon receipt of license from the Medical Supervisors of the District Examining Board. The Interior Department claims that their appointee should not be amenable to the District law regulating medical practice, and has written to the Commissioners, requesting that the Health Officer be directed to accept the death certificates, signed by Dr. Curtis. The Health Officer has been unable to find any clause in the Act of Congress regulating the practice of medicine in the District, which exempts Dr. Curtis from complying with the requirements of the Act. The Health Officer has also decided that Dr. Curtis is practicing medicine in violation of the law, and has directed the Coroner to review all cases of death reported on the certificate of Dr. Curtis. The local profession cordially endorse the action of Dr. Woodward.

WOMAN'S DISPENSARY.—The annual report of the Woman's Dispensary shows the total number treated to have been 2852;

number of new cases during the year, 1101; number of surgical operations, 48; number of prescriptions compounded, 2841.

WASHINGTON ASYLUM HOSPITAL.—The report of Dr. D. Percy Hickling, the visiting physician to the Washington Asylum Hospital, has been submitted to the District Commissioners. It shows the total number of patients treated during the year to have been 941, of whom 488 were white and 453 colored. The daily average attendance of the hospital was 85; number of prescriptions compounded, 28,900; total number treated in the Alms and Workhouse, 4062; insane cases examined, 57. He recommends an appropriation of $7,000 for building a new maternity ward, and $15,000 for building and furnishing a receiving ward for infectious diseases. He further recommends a nursery and an ambulance for emergency service, and a fumigation plant for patients' clothing, etc. He asks for an appropriation to furnish the nurses' home, and a salary for a trained nurse to have charge of the nursing in the hospital.

HOSPITAL FOR INCURABLES.—The report of Mrs. Helen D. McLanahan, the acting President, shows that the total number treated during the year was 55; number of deaths, 11. On June 30, 53 patients were in the house, of whom 12 were pay patients. The total expenditures for the care of the hospital were $12,731.65. She recommends a Congressional appropriation of $5,000 for the current year.

COLUMBIAN UNIVERSITY HOSPITAL.—The Columbian University Hospital, adjoining the Medical Department, is about to be occupied. The hospital is equipped in the most modern style, with large, well-ventilated wards for males and females and a number of private rooms. It has an operating room of modern design and spacious. The building is lighted by electricity and is provided with an elevator and cold-storage room. The physicians connected with the Medical Department of the University constitute the attending and consulting staff.

Dr. C. G. MORRIS has been commissioned an acting assistant-surgeon, U. S. A., and has been ordered to Chickamauga Park Hospital. Ga.

Dr. J. M. HELLER, acting assistant-surgeon, U. S. A., has been relieved from duty at Fort Washington, Md., and ordered to Camp Wikoff, Montauk Point.

THE PUBLIC SERVICE.

Movements of Army Medical Officers.—To duty at Camp Wikoff, Montauk Point, N. Y.: Lieut.-Col. Nicholas Senn, U. S. Vols.; Major J. L. Powell, Surgeon U. S. A.; Major Ira C. Brown, brigade surgeon; Major Simon P. Cramer, brigade surgeon; Major Samuel W. Kelly, brigade surgeon, and Acting Asst.-Surgeon John J. Cannan from Williamsport, Pa. To duty at Camp Meade, near Middletown, Pa.: Major David C. Peyton, brigade surgeon, and the following acting assistant-surgeons: W. L. Stevens from Orange, Va., Edward Lyon, Jr., from Washington, D. C., D. N. Grealish and Frederick H. Mills from Buffalo, N. Y., H. M. Miley from Chambersburg, Pa., H. M. Cohen from Baltimore, Md., and E. W. Karrmann from North Woodbury, Conn. To duty with troops at Fernandina, Fla.: Capt. W. F. Lewis, Asst.-Surgeon U. S. A., his orders to accompany the 5th U. S. Infantry to Santiago, Cuba, having been revoked. To duty with troops at Santiago, Cuba: Major John G. Davis from duty with the 7th U. S. Vol. Infantry at Jefferson Bks., Mo., and Major John J. Archinard from duty with the 2d Louisiana Vol. Infantry at Jacksonville, Fla. To duty with troops at Ponce, Porto Rico, via New York: Acting assistant-surgeons Azel Ames from Washington, D. C., Clarence M. Spalding from Rochester, N. Y., and Halsey L. Wood from New York City. To duty with troops at Chickamauga Park, Ga.: Brigade surgeons U. S. Vols.: Charles Adams, Oscar Le Seure, John L. Macumber, Bial T. Bradbury and Henry H. Lee, with the following acting assistant-surgeons: Milton D. Norris from Baltimore, Md., Wm. G. Young from Grand Rapids, Mich., Frank A. Roberts from Camden, N. J., Wm. P. Earle from Herkimer, N. Y., Josiah W. Richards from Slatington, Pa., James A. Keown from Lynn, Mass., Charles A. Cattermole from Lansing, Mich., Albert N. Jacob from Philadelphia, Pa., Dwight B. Taylor from Norwalk, Ohio, Chas. H. Stoddard from Milwaukee, Wis., Andrew Godfrey from Ambler, Pa., Chauncey T. Scudder and Chas. I. Woolford from Baltimore, Md. To duty with troops at Huntsville, Ala.: Major Chas. M. Gandy, brigade surgeon, with the following acting assistant-surgeons: Geo. F. Jennermann from Washington, D. C., Charles C. Jolliffe from New York City, Gustavus C. Thieme from Baltimore, Md., Chas. H. Andrews from Buffalo, N. Y., and J. Frederick Haller from Providence, N. Y. To duty at Camp Alger, Fall's Church, Va.: Chief Surgeon Francis R. Perceval from Washington, D. C. To the general hospital, Fort Myer, Va.: Major John E. Woodbridge, brigade surgeon, and Acting Asst.-Surgeon D. H. Lamb from Owosso, Mich. To duty with troops at Chickamauga Park, Ga., the following acting assistant-surgeons: Duncan S. Worth from St. Louis, Mo., Herbert M. Huston from Ruthven, Iowa, John B. Alcorn from Gallipolis, Ohio, T. H. Lander from Canton, Ohio, Harry A. Barnhardt from Philadelphia, Pa., Wm. E. Stemsen from Kansas City, Kan.; E. D. Meeker from Trenton, Mo., and A. G. Donaho, Jr., from Hartsville, Tenn. To report to the commanding General at Ponce, Porto Rico, for duty with troops, proceeding via Fort Monroe, Va.: Acting Asst.-Surgeons William J. Hughes from Baltimore, Md., John N. Goltra from Buffalo, N. Y., Michael E. Hughes from Adams, Mass., and Compton Wilson from Norfolk, Va. Via Charleston, S. C.: Acting Asst.-Surgeons Frank I. Debrow from New York, N. Y.; James Reagles from Schenectady, N. Y., Charles H. Farr and Edward A. Southall from Buffalo, N. Y., and Harry Street from Baltimore, Md. To the 4th Army Corps at Huntsville, Ala.: Lieut.-Col. R. M. O'Reilly, chief surgeon of volunteers. From the 4th Army Corps to Ft. Ethan Allen, Vt.: Capt. H. D. Snyder, Asst.-Surgeon U. S. A. To report to the commanding General, Camp Wikoff, Montauk Point, L. I., for duty with troops: Major John P. Dodge, Surgeon U. S. Vols.; Major Leonard B. Almy, chief surgeon of volunteers from the 3d Army Corps; Capt. F. A. Winters, Asst.-Surgeon U. S. A., and acting assistant-Surgeons Joseph M. Heller from Ft. Washington, Md., and William F. Skinner from St. Thomas, Pa. To the Dept. of Santiago, reporting to the commanding General: Lieut.-Col. Valery Havard, chief surgeon of volunteers, as chief surgeon of the Dept., from duty with the 5th Army Corps; Capt. W. F. Lewis, Asst.-Surgeon U. S. A., to accompany the 5th U. S. Infantry from the United States, and the following acting assistant-surgeons proceeding via Tampa, Fla.: W. L. Coleman from Houston, Texas, John F. Cronin from Savannah, Ga., L. De Poorter from New Orleans, La., John B. Sewell from Baldwin, La., W. H. Aylesworth from Fairfield, Iowa; E. J. Kenworthy from Tryon, N. C., Louis J. Genella from New Orleans, La., G. W. Luster from Utica, Miss., J. M. Lindsley from Nashville, Tenn., E. F. McClendon from Smithville, Texas, W. E. Moody from Hermanville, Miss., W. H. Reynolds from Packsville, S. C., O. W. Stone from Bay St. Louis, Miss., Batt Smith from Wharton, Texas, and A. L. Izlar from Ocala, Fla. From the 5th Army Corps to Washington, D. C., for instructions: Lieut.-Col. Benjamin F. Pope, chief surgeon of volunteers. To the U. S. hospital ship *Missouri:* Acting Asst.-Surgeon John E. Brackett from Washington, D. C. To the U. S. general hospital at Montauk Point, L. I.: Acting Asst.-Surgeons E. Nunez from Philadelphia, Pa., and Frank Donaldson from Washington, D. C. From the U. S. general hospital, Key West, Fla., to Key West Bks.: Acting Asst.-Surgeon Geo. R. Plummer. To the U. S. General Hospital, Ft. McPherson, Ga.: Capt. W. E. Purviance, Asst.-Surgeon U. S. A., from Ft. Morgan, Ala., and Acting Asst.-Surgeon John H. Grant from Buffalo, N. Y. To the U. S. general hospital, Ft. Myer, Va.: Acting Asst.-Surgeons Geo. W. Pattison from Buffalo, N. Y., and Geo. M. Bradfield from Philadelphia, Pa.

Promoted.—Major Victor C. Vaughan, from surgeon 33d Michigan Infantry to chief surgeon of division, U. S. Volunteers.

Resigned.—Major Chas. M. Robertson, chief surgeon of volunteers; Major Henry G. Fish, surgeon 3d Regiment volunteer cavalry; Major John W. Harriman, 50th Iowa Vol. Infantry, and Lieut. James A. Toole, Asst.-Surgeon, 3d Regiment volunteer infantry.

Died.—Major Lawrence Smith, Surgeon U. S. Vols., on the hospital ship *Relief*, while en route from Ponce, Porto Rico, to New York City.

CHANGE OF ADDRESS.

Boggers, Dr., from 308 to 220 W. Chestnut, Louisville, Ky.
Brothers, S., from 244 to 227 Madison St., New York, N. Y.
Bell, F. A., from 157 N. Akard to 389 Elm St., Dallas, Texas.
Crow, S. C., from Ann Arbor to Mason, Mich.
Coyle, J. E., from Jordan to Paducah, Ky.
Capron, V. J., from Everett to Roche Harbor, Wash.
Douglass, W. H., from Benton City, to Rush Hill, Mo.
Drew, C. A., from Harding to State Farm, Mass.
Gladmons, E., from Washington, D. C., to Southern Pines, N. C.
Gibbs, M. D., from Greenwood to Macon, Colo.
Jensen, P. C., from Chicago, Ill., to Manistee, Mich.
Kenyon, E. L., from People's Inst. Bldg. to 940 Madison St., Chicago.
Montgomery, F., from Clayton to Mt. Sterling, Ill.
Rawley, W. S., from 63d and Wallace to 750 W. 63d Pl., Chicago.
Van Deman, J. H., from Albionview to 9½ E. 8th, Chattanooga, Tenn.
Wenzlick, W., from 331 E. North Ave. to 310 E. Chicago Ave., Chicago.
Welch, J. P., from Glendale, to Cottonwood, Arizona.
Ziliak, J. E., from Ann Arbor, Mich., to Haubstadt, Ind.

LETTERS RECEIVED.

Alexander, A. J., Mayfield, Ky.; Alexander, W. H., Blakely, Ga.; Ayer & Son, N. W., Philadelphia, Pa.; American Medical Compend, Toledo, Ohio.
Belfield, W. T., Chicago; Bruner, W. E., Cleveland, Ohio; Blech, G., Chicago; Blech, G. M., Chicago.
Coley, W. B., New York, N. Y.; Carroll, C. T., Jr., Marvin, Tenn.; Chicago Polyclinic and Hospital, Chicago; Chrisinger, W. H., Trenton, Mo.; Christian, J. M., Washington, Ga.; Creighton, B. B., Manitou, Colo.; Chatterton & Co., A. L., New York, N. Y.; Carston, E. P., Madison, Wis.; Caulkins, N. M., Manito, Ill.; Charlton, N. E., Clayton, N. M.
Dennis, F. W., Unionville, N. Y.; Dwight, H., Friendship, N. Y.; Denver Chemical Mfg. Co., Denver, Colo.
Evans, D. W., Dell Rapids, S. D.; Edsen, C. E., Denver, Colo.
French, Pinckney, St. Louis, Mo.
Gihon, A. L., Sykeville, Md.
Hubbell, W. B., Elyria, Ohio; Hall, H. C., Detroit, Mich.; Hodghead, G. A., San Francisco, Cal.; Hill, E. A., Chicago; Hare, H. A., Philadelphia, Pa.; Horlbeck, H. B., Charleston, S. C.; Hannaford's General Adv. Agency, T. W., London, Eng.; Hessler, Robert, Indianapolis, Ind.; Hendrickson, C. R., Yukon, Oklahoma.
Johnson, G. W., Chicago; Jowers, J. G., Smith's Fork, Tenn.; Jarvis, A. A., Faulkton, S. D.; Jacinsky, J. R., Crete, Neb.
Kendall, L., Sikeston, Mo.; Katharmon Chemical Co., St. Louis, Mo.; Kavit, E., Philadelphia, Pa.
Lee, Elmer, New York, N. Y.; Lawrence, G. H., Galesville, Wis.; Lucas, S. T., Van Hill, Tenn.; Lane, E. B., Boston, Mass.
Madden, John, Milwaukee, Wis.; Mendenhall, W. C., Trotwood, Ohio; Merck & Co., New York, N. Y.; Mogk, W. A., Ann Arbor, Mich.; Moreland, W. H., Manitou, Colo.; Macintyre, David, London, Ont.; Moran, J., Adair, Mo.
Patch, Wm., Stanford, Ill.; Pierson, A., Spencer, Ind.; Pynchon, Edwin, Chicago; Phillips, J. P., Brockton, Ala.; Pillsbury, H. H., Palo Alto, Cal.
Rodman, W. L., Philadelphia, Pa.; Revue Generale de Pathologie Interne, Paris, France; Revue Hebdomadaire de Laryngologie, D'Otologie, Bordeaux, France.
Sears, M. H., Denver, Colo.; Stuver, E., Rawlins, Wyo.; Shelton, A. K., Oliver Springs, Tenn.; Stevens, J. L., Mansfield, Ohio; Shelby, Mary C., San Francisco, Cal.; Saunders, W. B. (2), Philadelphia, Pa.
Tyree, J. S., Washington, D. C.; Taylor, J. H., Providence, Ky.; Tuley, H. E., Louisville, Ky.; Trump, J. F., Collinsville, Ohio.
Wingate, N. O. B., Milwaukee, Wis.; Whitacre, H. J., Cincinnati, Ohio; Young, J. W., Afton, Iowa.